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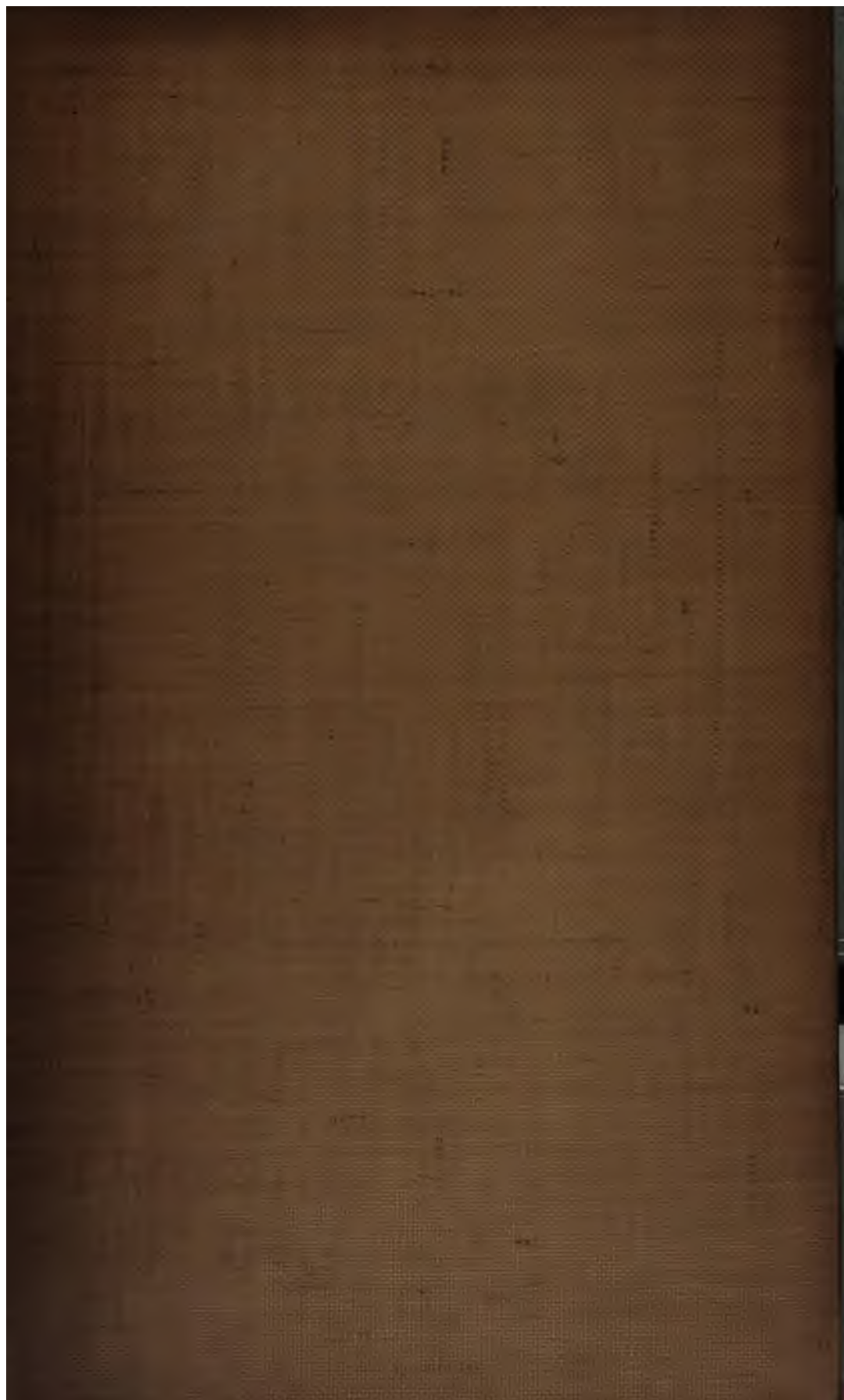
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Per. 15012 d. 49





THE ANNUAL REPORT
ON
THE HEALTH
OF THE
Parish of St. Mary Abbots
KENSINGTON,
DURING THE YEAR
1874.

BY
T. ORME DUDFIELD, M.D.,
MEDICAL OFFICER OF HEALTH.

KENSINGTON:
J. WAKEHAM, PRINTER, 4, BEDFORD TERRACE, CHURCH STREET.
1875.



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NINETEENTH ANNUAL REPORT
OF THE
MEDICAL OFFICER OF HEALTH,
Being for the year 1874.

To the Vestry of the Parish of St. Mary Abbott's, Kensington.

GENTLEMEN,

I propose in this, the Nineteenth Annual Report of the Medical Officer of Health, to follow the plan adopted in my previous reports: that is to say, the vital statistics will be made up to the end of the registration year (January 2nd, 1875), for the sake of comparison with the Registrar-General's figures for the entire Metropolis: the Tables, showing the sanitary work carried out by your very competent staff of inspectors, will be made up to the end of the Vestry year (March 25th, 1875); while, with respect to other matters calling for notice, I shall bring the report down to the latest possible period, no useful purpose being served by delay; it being, moreover, in every way the better plan to refer to subjects while they are tolerably fresh in recollection, and before they have lost their interest. I shall, as usual, preface my report with some general remarks, which, I trust, will be found worthy of perusal. And I may here mention that the first Six Tables in the Appendix are given in the form settled last year by the Society of Medical Officers of Health, with a view to ensure uniformity in statistical returns. The subject was brought under the notice of the Society by myself, and a great deal of thought and labour devoted to it, in order to make the tables generally acceptable. I now pass on to observe that the public health in this Parish, as gauged by the gross mortality, was not so good during the year 1874 as in the previous year, the deaths registered (2,696) showing an increase of 260. The increase in the *rate* of mortality, however, was not large in proportion, for as the population increased by 5,000, 91 deaths have to be deducted on that account, while 32 deaths are accounted for by an increase in the number of deaths of non-parishioners registered at the Brompton Hospital for Consumption and the Diseases of the Chest. The real excess of mortality, therefore, was 137, and of these deaths 98 belong to the group of zymotic diseases, and were due to a severe and prolonged epidemic of measles, leaving 39 deaths to be spread over the remainder of Table 3 (Appendix); but as a matter of fact the higher rate of mortality from chest diseases, which will be referred to hereafter, more than accounts for this number. If we assume that the deaths of Kensington parishioners outside the parish were as numerous as the deaths of non-parishioners at the Brompton Hospital, which is situated within the parish, the rate of mortality during the year would be 19·5 per 1,000 persons living—a rate that compares not unfavourably with the rate for

the entire metropolis, which was 22·5 per 1000. If, however, in the absence of definite information respecting deaths of parishioners taking place out of the parish, we restrict our view to the deaths of parishioners registered within the parish—deducting 125 deaths at the hospital and 36 at St. Joseph's House—the rate of mortality was only 18·3 per 1,000. The subjoined table shows the rate in the several great divisions of the metropolis, as given by the Registrar-General in his annual summary, and in Kensington:—

DEATH RATE, 1874.

Kensington	* ..	19·5 per 1,000
All London	..	22·5 ..
West Districts	..	20·9 ..
North	..	21·8 ..
Central	..	25·6 ..
East	..	25·4 ..
South	..	21·5 ..

For registration purposes, Kensington * is divided into two sub-districts of very unequal size and population, and which, as we shall see, are not less remarkable in other respects. The Kensington Town sub-district embraces everything north of the Kensington main road, and a good deal south of it. The Brompton sub-district completes the map of the parish, which, I may say, is exceedingly awkward in shape, being very long from north to south and very narrow from east to west, and therefore present considerable difficulties in the task of sanitary administrations. The Town sub-district comprises two wards, respectively named the Ward of St. Mary Abbott's, Kensington, and the Ward of St. John, Notting Hill, and St. James, Norland.† The latter ward

* The "Kensington" Registration District, by which most persons understand the parish of Kensington, really comprises a much larger area, embracing within its limits the whole of Paddington, Hammersmith, and Fulham. The subjoined table shows the proportion which Kensington proper bears to the other parts of the district.

	Area in statute acres.	Inhabited houses, 1871.	Population, 1871.
Kensington ...	2,190	15,735	120,299
Paddington ...	1,251	11,847	96,813
Hammersmith	2,287	6,719	42,691
Fulham ...	1,716	3,469	23,350

† The subjoined table shows the area, inhabited houses, and population of the three wards into which the parish is divided for parochial purposes:

Name of Ward.	Area in statute acres.	Inhabited houses, 1871.	Population, 1871.	Rateable annual value of property, 1871.
Holy Trinity, } Brompton. }	... 439	3,224	22,128	£246,716
St. John, Notting Hill, and St. James, } Norland. }	905	7,730	62,475	£365,012
St. Mary Abbott's ...	846	4,781	35,696	£323,992
	2,190	15,735	120,299	£985,720

contains the largest proportion of poor inhabitants. The greater number of poor comprised in this sub-district, as a whole, helps to explain the marked difference in the vital statistics of north and south, to which, I wish, in the present report, to give some prominence. The birth-rate of the parish in 1874 was 31·7 per 1,000 persons living, that of all London being 35·7, and of All England (1872) 35·8. But the birth-rate in the Town district was 33·6, and in Brompton only 24·8 per 1,000. The death-rate of the whole parish being taken at 19·5 per 1,000 (and the necessary redistribution of deaths in hospital and workhouse, in proportion to population, being made), it appears that the annual rate of mortality in the Town sub-district was 20·4 per 1,000 and in Brompton only 16·6. The above facts may be made more clear by a comparative statement. If the births and deaths in Brompton had been as numerous in proportion to population as they were in the Town sub-district, 1,122 children would have been born and 681 persons would have died; whereas, in fact, only 815 children were born, and the deaths, after correction, were only 548. Or, to put it the other way, if the births and deaths in the Town sub-district had been on the Brompton scale only 2,567 instead of 3,536 children would have been born, and only 1,726 persons, in place of 2,147, would have died. These remarkable discrepancies, *quoad* the birth-rate, may be in part explained by the somewhat larger proportion of females per 1,000 of the population in the Town sub-district compared with Brompton. The total estimated population in July was 138,000, viz., males 56,240, and females 81,760. In every 1,000 living, females were approximatively as 593 to males 407. In the Town sub-district there were, at the census in 1871, 587 females to 413 males; in Brompton the females were 608 and the males 392 per 1,000 persons living. We must assume, therefore, that there are fewer marriages in Brompton, and that those marriages are less fruitful than in the more densely-populated and poorer northern section of the parish.*

Less difficulty is experienced in accounting for the lower rate of mortality in Brompton, it being well known that the death-rate of females is considerably less than that of the male sex. Taking the whole parish, it appears that the rate of mortality was 23·9 in the male, and only 16·5 per 1,000 in the female sex. The magnitude of this difference may be illustrated by the statement that if the mortality in the entire population had been at the female rate, the deaths would have numbered only 2,208 instead of 2,696, while they would have been no fewer than 3,298 at the rate that prevailed amongst males.

The difference between the two districts is not confined merely to gross numbers of deaths. It is seen in the character of the prevalent fatal diseases, and points to a generally better state of health in Brompton, and to a better prospect of life for its inhabitants. This difference depends, no doubt, on the superior status

* The births that took place in the Workhouse are all included in the Town registration, but the number (120) is too small to affect the calculation.

of a large proportion of the population in the latter district, and on their possession of those necessities and comforts of life to which the prolongation of existence is so largely due. I do not propose to enter at length upon this interesting subject now. I shall content myself for the present with putting on record the facts at which I have arrived, leaving them for the most part, to speak for themselves. The subjoined table shows the number of deaths from certain diseases in the two sub-districts, and the number that would have occurred in the Town sub-district had the mortality been on the same scale as in Brompton, due regard being had to population:—

Name of Disease.	Actual No. of Deaths in the Town Sub-District.	Deaths in the Brompton Sub-District.	Calculated No. of Deaths in Town on the Brompton scale	Excess or Deficiency in Town compared with Brompton.
The Seven principal Zymotic Diseases	332	66	176	+156
Measles ..	115	6	20	+ 95
Diphtheria ..	24	2	6	+ 18
Scarlet Fever ..	28	4	12	+ 16
Typhus Fever ..	9	0	0	+ 9
Enteric Fever ..	19	9	23	— 9
Simple Continued Fever	11	4	13	— 2
Whooping Cough	36	9	28	+ 8
Diarrhoea ..	90	22	69	+ 21
Puerperal Fever	18	6	19	— 1
Croup ..	25	1	3	+ 22
Erysipelas ..	14	8	25	— 11
Cancer ..	51	16	50	+ 1
Tuberculous Diseases (phthisis, scrofula, &c.)	268	59	186	+ 82
Brain Disease, (Apoplexy and paralysis)	127	46	144	— 17
Convulsions ..	50	9	28	+ 22
Heart Disease ..	102	33	103	— 1
Lung Diseases ..	461	93	292	+169
Enteritis and Peritonitis	34	5	16	+ 18
Liver Disease ..	30	7	22	+ 8
Bright's Disease ..	14	8	25	— 11
Atrophy of children	143	20	63	+ 80
Premature birth ..	35	11	34	+ 1
Childbirth ..	11	3	9	+ 2
Teething ..	26	9	28	— 2
Old age ..	79	15	47	+ 32

The greater fatality of the zymotic diseases generally, and of measles in particular, in the Town sub-district, cannot fail to be noticed; as well as the high mortality from tuberculous and lung diseases, atrophy of children, croup, &c. It is obvious, in fact, that the diseases which depend on a lowered condition of vitality, or on hereditary taint, are more prevalent in the Town sub-district than in Brompton. So are the diseases that may be correctly described as of a more or less preventable character, such, for example, as the lung diseases which are so fatal at the extremes of life, when the influences of neglect and poverty, on the one hand, and of care and comfort on the other, are so strong for evil or for good in the exposure of young and old to, or their preservation from, the predisposing causes of disease. The diseases which mark the later periods of life are, as might be expected, prominently noticeable in the Brompton mortality, such, for instance, as the brain diseases, apoplexy and paralysis, and heart disease. Cancer was equally fatal in both districts. Croup, on the other hand, was most fatal in the "Town," and Bright's disease, by comparison, in Brompton. I say nothing on the relative numbers of deaths attributed to "old age," as the employment of that term generally implies failure of diagnosis rather than death without disease.

Under the heads of the various diseases, and in Tables 3 and 3A (Appendix), I have specified in detail the causes of death; but in these introductory general remarks it will not be out of place to refer to the mortality in the parish as a whole from some of the principal classes and orders of diseases. Thus the seven principal diseases of the zymotic class (or rather *six*, for there was no death from small-pox) were accountable for 338 deaths—a mortality equivalent to 2·8 per 1,000 persons living, and to 144 out of every 1,000 deaths. Chest diseases, other than phthisis, killed 554 persons (an increase of 71 over 1873), equivalent to 4 per 1,000 of the population, and to 208 per 1,000 deaths. Tuberculous diseases (including phthisis, scrofula, rickets, and tabes) were the causes of 326 deaths, or 2·3 per 1,000 living, and 121 per 1,000 deaths. Nearly allied to these diseases, if not identical in origin, are the wasting diseases of children, viz., those registered as marasmus, atrophy, debility, want of breast milk, and premature birth. These killed 209 children under five years of age, equal to 1·5 per 1,000 living, and to 77 per 1,000 deaths. The convulsive diseases of infants (hydrocephalus, infantile meningitis, convulsions, and teething) were fatal to 161 infants under five, or 1·1 per 1,000 living, and 59 per 1,000 deaths (*vide* Table 4, Appendix). Constitutional diseases caused 591 deaths = 4·2 per 1,000 living, and 232 per 1,000 deaths. Local diseases caused 1,143 deaths = 8·3 per 1,000 living, and 434 per 1,000 deaths. Developmental diseases caused 356 deaths = 2·5 per 1,000 living, and 138 per 1,000 deaths. Violent deaths (50) were equal to ·3 per 1,000 living and to 18 per 1,000 deaths. The deaths of which the causes were not specified, or were ill-defined, were 22 in number = ·1 per 1,000 of the population and 7 per 1,000 deaths.

The subjoined table shows the death-rate in the parish for 13 periods of four weeks corresponding to my monthly reports, the deaths of non-parishioners in the Brompton Hospital being excluded :—

Date of Report. Four weeks ended		Rate of Mortality per 1,000 living.	Mean temperature of the air.
January 31	..	19·8	41·6
February 28	..	23·2	38·7
March 28	..	22·0	43·0
April 25	..	16·8	49·5
May 23	..	16·8	48·2
June 20	..	14·1	58·4
July 18	..	17·5	62·8
August 15	..	19·9	61·1
September 12	..	14·7	59·4
October 10	..	13·7	55·3
November 7	..	15·3	51·6
December 5	..	21·4	39·1
January 2 (1875)	..	24·7	32·7
Average ..		18·4	

Before concluding these general and prefatory remarks, I think it right to say a few words on the subject of certain outbreaks of disease due, it is not unreasonably believed, to a contaminated condition of that important article of diet, milk. It is true that the facts to which I am about to advert belong rather to the sanitary history of the current year than to 1874 ; I feel, however, that it would not be right to defer the publication of them, and the subject can be referred to again, if necessary. With reference first, then, to scarlet fever, a remarkable outbreak occurred in the month of June (1875) in South Kensington. Within sixty hours after a dinner party of sixteen in one of the most splendid streets in the metropolis, and in a house which had no sanitary defect and no infected inmates, six of the party were prostrate with scarlet fever. There was a large assemblage at the “at home” after the dinner, and four or five of the guests were stricken either with primary scarlatina or with characteristic sore throat. Some of the servants and others, likewise, were similarly affected. A vigorous enquiry excluded all suspicion of personal contagion as the cause of the outbreak. The one fact clearly proved was that all the sufferers had partaken of cream in some form or other, cream being of course more largely consumed at the dinner than at the “at home.” Many persons, doubtless, who partook of cream escaped, and their immunity may be accounted for in a variety of ways ; but it is certain that every one who was attacked had partaken of cream. There were several curious not to say crucial cases, pointing to the cream as the nidus of infection. But how the *contagium* found its way into the milk-pot, if there, is a question that has hitherto baffled enquiry. The dairy—in town, but not in Kensington—whence the offending fluid

was obtained was carefully scrutinised as to the state of health of the cows and of the employés, but no fact was elicited to explain the occurrence.*

As bearing on this subject, I may remark that it is not very long ago that a number of cases of sore throat, occurring in families supplied from a certain dairy, were brought under my notice; and I ascertained that illness of a similar character had prevailed in the house of the dairyman.

Referring to this subject, Professor Parkes, in his "Practical Hygiene," states that scarlet fever has appeared to get into milk from the cuticle or throat discharges of persons affected with scarlet fever who were employed in the dairy while ill or convalescent. Remarkable cases of this kind have already been reported, and the fact that another zymotic disease—viz., enteric or typhoid fever—has been spread widely through the medium of milk, only serves to increase the importance of the subject in a sanitary point of view. It is well ascertained, however, that enteric fever has been conveyed in the foul water used in diluting milk—a double evil being thus inflicted on unwary purchasers.

At about the same time as the scarlatina outbreak my attention was again directed to milk as a probable source of disease by a leading practitioner, who gave me the particulars of a very interesting series of cases of dysentery, attributed on apparently sufficient grounds to the use of milk from diseased cows; and of a further series of cases of diarrhœa, attributed to some change in the character of milk supposed to depend on the food on which the cows were being fed. The information came too late to admit of an investigation of the subject, but the facts deserve to be put on record for future guidance.

In the first set of cases, seven in number, the symptoms were generally of a severe character. Three of the patients were young children, and the other four adults. The child first attacked, aged $2\frac{1}{2}$ years, died after seventeen days' illness. The dysenteric symptoms were sharp and constant, and marked on the first evening by a strong convulsion. The little patient sank, worn out by incessant tenesmus and exhausted brain-power. The body temperature was

* P.S.—(August.)—It may be mentioned that no new facts came out subsequently either to strengthen or to weaken the suspicion above stated of milk being the carrier of the scarlatinal poison—beyond this, that there were several cases of the disease in another parish in which the dairy is situated, and in families supplied from the dairy. It may be added that the Kensington cases, which were remarkable for the suddenness with which the attack followed on the application of the supposed cause, all did well. They ran the usual course, and were followed by very free desquamation. There were no derivative cases. A similar outbreak was reported subsequently also within a few days after a dinner party at West Brompton. In this case, however, so far as I can gather—for I received little direct information on the subject—though the idea of a common cause of disease, as in the previous outbreak, was suggested, absolutely nothing could be traced to support the suspicion of milk-poisoning, for the dairy—several miles from Town—was found to be in an unimpeachable condition, and no sickness was discovered in the employés or their families, or at the London dépôt. A very small quantity of cream appeared to have been consumed, the actual supply on the day in question being one shilling's worth. For the present the bare facts of these cases can be simply stored for future use; and with the inferences which have been sought to be drawn from them must be taken *quantum valeant*.

high throughout. This was the only fatal case. The second case was that of the child's nurse. She was sent home showing signs of fever, and was ill a long time. In the third case the child, aged six years, had dysenteric straining of almost pure blood. There was little constitutional disturbance, and the attack soon yielded to treatment. The fourth case was that of a middle-aged gentleman attacked with diarrhæa, which assumed a dysenteric character, as many as twenty-five motions being passed in a day. The attack, which left marked debility, lasted ten days. The next case was that of an old nurse, who, ridiculing the idea of the milk being the cause of illness, drank all that was left after tea one day, and was rewarded with a violent diarrhæa that lasted a whole week. Another case was that of a child (who, however, was teething, and) who, after partaking of milk from the same source, suffered during six or seven days under a severe dysenteric attack. The seventh case was that of a lady, who after some days of bowel irritation, was prostrated with acute dysentery which was long in yielding and left great debility.

Upon enquiry being made of the dairyman who supplied the affected families with milk, he acknowledged that two, if not three, of his cows were "wrong in their quarters"—i.e., they had diseased udders; but he hoped that the small amount of bad milk they yielded would not be felt with the large quantity of good milk with which it was mixed! In each case the supply of milk from that particular dairy was cut short, and as regards the families interested, a limit was thus set to the endemic. But what mischief, if any, was done in other directions does not appear, and it is too late to enquire.

The other cases referred to were eleven of diarrhæa, which occurred at about the same period of time. The milk supply was derived in part from a dairy and in part from cows kept for private use, the one point in common between the two sheds being that "distillers' wash" formed part of the food of the cows. There is no history of any illness or disturbance of the secretion of the cows themselves.

I regret that I had not an opportunity of investigating these cases—and especially the first series—at the time of their occurrence, as they might have thrown some light on an obscure but very important, an increasingly important subject—viz., that of disease in animals as a factor of disease in man. Professor Parkes states, *inter alia*, that milk contaminated with pus from an inflamed udder will give rise to stomatitis (inflammation of the mouth) in children and to apthæ (thrush) on the mucus membrane of the lips and gums. But there is no mention of these symptoms in the cases under review. Parkes also refers to the power of milk which contains large quantities of the fungus *Oidium lactis*, or *Pennicillium*, to produce dyspeptic symptoms, and even cholera-like attacks. Gastric irritation and febrile gastritis are also enumerated among the effects following the ingestion of impure milk.

But, after all the most important question is, how to prevent the occurrence of such cases? And here the difficulty is apparent of getting such regular skilled inspection of cowsheds (in Town, for it is hopeless, I fear, to attempt any supervision of the extra metropolitan sources of milk-supply!) as would suffice to detect disease in cows or employés, and secure effectual separation of diseased men and animals from the dairy. Probably nothing would have a greater effect in breeding caution in the vendors of milk than legislative enactment imposing severe penalties (not pecuniary only!) for the offence of selling for human food the milk of diseased cows.

In the case before us, it would appear that the dairyman knew that some of his cows were "wrong in their quarters," and yet, though their milk could be of small value (for disease diminishes the yield rapidly and greatly), families were exposed to the risk of illness, and in one case the calamity of death was brought on a household, that no portion of the profits of business might be lost. We may charitably and reasonably believe that the dairyman anticipated no such consequences; but what so likely to prevent the recurrence of such a catastrophe as a consciousness of the risk incurred by vending diseased milk?

Before quitting this subject I may express my opinion that dairies are multiplied more than is desirable, and as a consequence (I have adverted to the subject in another part of this report), the sheds are often of a very unsatisfactory character. Large dairies, under careful supervision, managed with a due regard to sanitary requirements in man and animals, and situated in the suburbs or outskirts of the metropolis, would be a boon the value of which is likely to be the more appreciated as facts such as those noted above accumulate.

POPULATION, &c.

The estimated population of Kensington at the middle of the year was 138,000, an increase of 5,000 over 1873. The Town sub-district contained about 105,000, and the Brompton sub-district about 33,000 in round numbers. The males numbered about 56,240, and the females 81,760:—excess of females over males, 25,520. In every 1,000 there were approximatively 407 males and 593 females. The subjoined table shows the number of persons of each sex, arranged in groups of ages, at the Census, 1871:

AGES OF MALES AND FEMALES, 1871.

All Ages.	Under 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 to 95	95 and upwds.
Males, 48977	7065	10198	8948	8317	5983	4339	2464	1270	378	33	2
Females 71322	7147	11527	16535	14203	9080	6241	3768	2000	667	97	7
Total, 120299	14212	21725	25533	22520	15063	10580	6232	3270	1045	130	9

From the above table it appears that there are an almost equal number of the sexes under the age of 5. Between 5 and 15 the excess of females begins, amounting to 1,329—this representing the “school” age, and the preponderance of females being explained, with probability, by the large number of girls’ schools in the parish. In the next three decades (15 to 45) there is a further large increase of females, viz., 7,637, 5,886, and 3,117 = (16,640), a considerable proportion of which doubtless consists of domestic servants. The increase is maintained throughout the table, but on a diminished scale, amounting in the three following decades (45-75) to 3,936, viz., 1,902, 1,304, and 730. Of persons above 75 years of age, 1,184 were enumerated; the excess of females being 358. The preponderance of females at middle life and in old age is probably due to the residence from choice of many independent persons, attracted by the salubrity and by the social and other advantages of Kensington; and to the greater longevity of women.

The superficial area of the parish is 2,190 acres, viz., 1,497 in the Town sub-district, and 639 in Brompton. Some 300 or 400 acres are still uncovered by buildings. The density of the population is about 74 persons to an acre. The total number of houses, including empties and those in course of erection, slightly exceeds 20,000. The inhabited houses at the middle of the year were about 17,667, an increase of 747 over the previous year. There were about 7·8 persons to each house on an average throughout the parish; but at the census, 1871, it appeared that the average in the Brompton Sub-district was only seven.

The subjoined table is of interest, showing as it does the remarkable growth of the parish in wealth and population during the present century :

The Year.	Population.	Rateable Value.	The Year.
1801	8,556	£75,916	1823
1821	14,428	93,397	1833
1841	26,834	142,772	1843
1851	44,053	257,103	1853
1861	70,108	375,333	1860
1871	120,299	590,711	1865
1874 (estmtd.)	138,000	817,326	1870
		£1,119,442	(April) 1875

MARRIAGES.

The marriages celebrated during the year were 1,311; one marriage to 105·2 of the population. Nineteen persons were married out of every 1,000 living. The marriage rate in all England in 1872 (last year of publication) was 17·5. The marriages in Kensington were celebrated as follows :

In Churches	1077
At Nonconformist Places of Worship ..	71
At Roman Catholic „ ..	70
At the Superintendent-Registrar's Office ..	93

Total 1311

The marriages in the three previous years were : 1871, 1,131 ; 1872, 1,132 ; 1873, 1,241.

BIRTHS.

The births registered—registration not being compulsory—were 4,351. The annual birth rate in Kensington was 31·7 per 1,000 persons living, and in the Metropolis 35·7. The births in the Town sub-district were 3,536, and in Brompton 815: 2,216 males and 2,135 females were born. The males formed about 51, and the females 49 per cent of the births—104 males being born to 100 females: about the same proportion as in all England. One child was born to 31·6 of the population. The birth rate in the Town sub-district was 33·6, and in Brompton 24·8 per 1,000. The deficient birth rate, as compared with that of the Metropolis and England, is the result of the great disproportion in the relative number of the sexes already alluded to; the rate, however, is slightly increasing, as may be seen by reference to Tables 1 and 2 (Appendix.)

The subjoined table shows the quarterly number of births in each sub-district:

	KENSINGTON TOWN Sub-District.			BROMPTON Sub-District.			Grand Total
	Males.	Females.	Total.	Males.	Females.	Total.	
1st Quarter,	484	475	959	94	111	205	1164
2nd „	464	409	873	102	95	197	1070
3rd „	435	405	840	84	103	187	1027
4th „	448	416	864	105	121	226	1090
Total..	1831	1705	3536	385	430	815	4351

DEATHS.

The deaths registered in 1874 were 2,696, viz., 2,102 in the Town sub-district and 594 in Brompton. After re-distribution of the deaths in the Workhouse and Hospital (the deaths in the latter institution remaining as a compensation allowance for the deaths of parishioners occurring outside the parish), the numbers in the respective districts stand thus: Town, 2,147; Brompton, 548. The death rate was 19·5 per 1,000 (all London 22·5), the death rate in the Town sub-district being 20·4, and in Brompton 16·6. Thirteen hundred and forty-seven males died, and 1,349 females; the deaths of females being only two above the males,

although the females exceed the males in the population by no fewer than 25,520. The death rate of males was 23·9, of females 16·5 per 1,000. The general death rate in the parish, excluding the deaths of non-parishioners at the Brompton Hospital and the deaths at St. Joseph's House, Notting-hill, was 18·3 per 1,000. The subjoined table shows the number of deaths in each quarter and in each district, excluding the deaths of non-parishioners in the Hospital at Brompton :

KENSINGTON TOWN Sub-District.				BROMPTON Sub-District.			
	Males.	Females.	Total.	Males.	Females.	Total.	Grand Total
1st Quarter,	295	307	602	63	64	127	729
2nd ,,	218	227	445	55	53	108	553
3rd ,,	238	245	483	49	56	105	588
4th ,,	294	278	572	58	71	129	701
Total ..	1045	1057	2102	225	244	469	2571

The deaths under one year of age (762) bear the proportion of 17·5 per cent. on the registered births (London 15·5), and they were equal to 28·5 per cent. of the total deaths (London 24·6.) The deaths under five (1,188) were equal to 27·7 per cent. on the number of births, and to 45·4 per cent. of the total deaths; the relative proportions in all London being 26·3 and 41·6. The deaths at 60 years of age and upwards (582) formed 21·7 per cent. of the total mortality in Kensington, the relative proportion in all London being 21·6.

Impressed with the imperfections of mere general death rates and proportional relations as given above, I have, at considerable labour, estimated the population in groups of ages, and worked out the death rate for each group—showing the number of deaths per 1,000 persons living, as follows :

Age.	Estimated Population.	Actual number of deaths.	Deaths per 1,000 persons living.
Under 1	3,762	762	202·8
1 and under 2	3,153	223	70·9
2 „ 5	9,413	203	21·6
(0 „ 5)	(16,328)	(1,188)	(73·)
5 „ 15	24,910	105	4·2
15 „ 25	29,262	105	3·6
25 „ 35	25,822	148	5·7
35 „ 45	17,267	151	8·7
45 „ 55	12,145	198	16·3
55 „ 65	7,154	199	27·8
65 „ 75	3,754	232	62·1
75 „ 85	1,199	183	153·8
85 „ 95	149	54 }	400·
95 and upwards	10	8 }	
	138,000	2571	

Since the preceding Table was worked out I have become acquainted with an interesting and valuable paper by Mr. Thomas A. Welton, F.S.S., on "The Effect of Migrations upon Death Rates," read before the Statistical Society on the 15th June, 1875, and which enables me to supplement it by the following Table, in which are contrasted the death rates at certain ages in England and Wales, and in the Metropolis during the 10 years 1861-70, and in the Parish of Kensington in 1874, calculated on the number of deaths per 1,000 persons living at the several ages.

Place.		0-5	15-25	Age. 25-35	55-65	65-75
England & Wales	{ 10 years }	68·5	7·3	..	..	..
London	{ 1861-70 }	81·9	6·3	9·8	38·8	75·4
Kensington (1874)	- -	73·0	3·6	5·7	26·8	62·1

It must be obvious that the truest mode of calculating death rates is that used in the above Tables, and the result of such calculations is by no means unfavourable to the character for salubrity of the parish of Kensington. Did time permit of following out the method for the sexes, and in the two sub-districts, the results would, I doubt not, be very much more favourable for Brompton, and for the female sex, than they are for the entire parish, and for both sexes.

SPECIAL CAUSES OF DEATH.

ZYMOTIC DISEASES.—The deaths from the seven principal diseases of the zymotic class, named below, were 388 in number, viz.: 332 in the Town sub-district and 56 in Brompton, an increase of 98 over the previous year: 96 of the additional deaths belonging to the Town sub-district. Nevertheless, the mortality from these maladies was little above the average of the previous 10 years (380), and considerably below the corrected number, after due allowance for the increase of population. The deaths were equivalent to 2·8 per 1,000 persons living, and to 144 per 1,000 deaths, as against an average of 178 in the 10 years 1864-73. The deaths in London in 1874 from the same diseases were 147 per 1,000 deaths, and in all England in 1872 (the latest year of publication), 188.

Deaths from the seven principal Zymotic Diseases.

	Town.	Brompton.	Total.	Per 1,000 deaths.
Small Pox - - -	0	0	0	0
Measles - - - -	115	6	121	45
Scarlet Fever - -	28	4	32	11·8
Diphtheria - - -	24	2	26	9·6
Whooping Cough -	36	9	45	16·7
Fever - - - - -	39	13	52	19·3
Diarrhœa - - - -	90	22	112	41·6
Total ..	332	56	388	144·0

It will be observed that there was no fatal cases of *small-pox* during the year: the first time during the decade of such immunity. But, on the other hand, the year was marked by an epidemic of *measles* of extraordinary severity, and confined entirely to the Town sub-district. During the year 1873 the deaths from this affection were 38, of which 31 occurred during the months of November and December, the commencement of the epidemic. Of these 38 deaths, 28 belong to the Town sub-district. The mortality in Brompton was 10 during the whole of 1873, but fell to 6 last year; while the deaths in the Town Sub-district rose to 115. Of the total of 121 deaths, 119 occurred under the age of 5 years. The highest total in the previous 10 years was noted in 1864, when 100 children died of this complaint (vide Table 5 Appendix). The total mortality during the last epidemic was 148, viz., 16 in November and 15 in December 1873, and 107 during the first five months of 1874, viz., January, 25; February, 31; March, 25; April, 16; and May, 10. Measles is always more fatal when it occurs as an epidemic, and especially during the winter months, the immediate cause of death being, in the majority of cases, some intercurrent complication affecting the lungs. The brunt of the epidemic fell on the poorer classes in the northern parts of the parish.

Scarlet Fever was fatal in 32 cases—an increase of 22 over the mortality of the previous year. 28 of the deaths took place in the Town sub-district, and 4 in Brompton—21 of the victims being under 5 years of age. The disease was, to, a certain extent, epidemic in the Autumn, and, fears being entertained that it might spread, through the agency of the Board Schools, precautions were taken by the London School Board, acting on the suggestions I laid before your Vestry, to prevent children attending school from infected houses. The evil blew over as the winter advanced; but, in accordance with the usual course of epidemic scarlet fever, a more severe outbreak may be looked for during the current year, the signs of which are not wanting at the present writing.

I have already referred (p. 10, *ante*) to a curious outbreak of scarlet fever following on a dinner-party at South Kensington, and it may be here mentioned that a report of the occurrence having found its way, with more or less inaccuracy, into some of the papers, a good deal of alarm was created, and an impression got abroad that the disease was very prevalent in Kensington. This impression was not confined to the immediate locality, and the effect of it was to cause a considerable exodus of the wealthier classes at a prematurely early period of the "season," as well as more or less consequent injury to trade. Some suspicions connected with the state of the Knightsbridge Barracks and the health of the soldiers' families, including those that lived outside, added fuel to the fire, if indeed they did not kindle it. I had no reason, myself, to suspect any extensive prevalence of scarlet fever, for I knew that the deaths though rather above the average were still

few in the aggregate, and I was aware, after repeated enquiry, that the cases under treatment at the three charitable dispensaries and by the five district Poor Law Medical Officers were astonishingly few. In fact, on several occasions when enquiry was made, it turned out that only one or two, or at the most three cases, were under the care of the Medical Officers, although they have many thousand cases of sickness among the poorest classes under their care during the year. I also ascertained from many medical men that they had very few cases under their care, most of them none at all. I stated these facts in my June report, but as the alarm was really great, I thought it well to address a circular letter to the two hundred and fifty medical men whose names appear in the Medical Directory as residents in Kensington, asking for information and stating all I knew as to the actual dimensions of the epidemic, if it could be so called, and the comparative abeyance of scarlet fever in dispensary and parochial practice. To this letter I had fewer than fifty replies, including those that were *viva voce*. As I had asked for positive information only, it is probable that many of those who did not favor me with any reply were silent for the best of reasons, viz., that they had nothing to communicate. Of those gentlemen to whose courtesy I am indebted for their replies only six had any cases under treatment. The testimony of all my correspondents excepting two was unanimous in this—that the disease generally assumed a mild form, and the correctness of this view was supported by the fact that although adults formed a large proportion of the cases, the few deaths that occurred were those of young children. The exceptions referred to went to prove the rule. The first-named was a group of seven cases in one house of a person in good circumstances, in which it was subsequently discovered that the cistern was not only in untrapped connection with the drains but was also in a disgusting condition of filthiness, to which cause my informant attributed the outbreak. This fact, however, may perhaps with greater probability be the explanation of the severity of the disease, and the sharp *sequelæ* in all the cases. There were no deaths. In the second group of cases, eleven in number, occurring in three families of 21 persons occupying rooms in two small houses in a street at Notting Hill, there were five deaths, but, as I stated in my July report the causes of the severity and the fatality of the outbreak were to be found in the circumstances of the people and in their dwellings, “The fatality of the disease,” I remarked, “has been great in proportion to the number of cases . . . and this I attribute to the want of proper accommodation, etc., for the sick, the spread of the disease being the direct and necessary result of the retention for home treatment of first cases. It is practically impossible to isolate the patients in the crowded houses of the poor, and the parents are generally unwilling to allow their children to be removed to the hospital, the prejudice against which, however rarely survives actual experience.” In the same report I alluded to the concealment of cases, and to the fact that the regis-

tration of a death is oftentimes the first clue to the existence of the disease, and the information then comes too late for practical, *i.e.*, *preventive* purposes. It is obvious, also, after repeated experience that some of the poor who can ill afford to pay a doctor, employ the services of private medical men for fear that if they applied for Parish relief the sick child, or children, will be sent to the hospital. Private practice, is, under such circumstances, conducted under great disadvantages, for the payment of the small fees with which the medical man is content in such cases, deprives the poor of the means of purchasing those comforts, not to say necessities, of the sick chamber, on which, *inter alia*, recovery so largely depends. It is heart-breaking to see the wan faces of little sick children in their miserable rooms, especially when the contrast is mentally made between the condition prevailing "at home," and the well-ordered hospital, with its staff of doctors and nurses, and all requisites for every stage of illness and convalescence. Another case that came under my notice in the course of the enquiry may be mentioned. The child was attended by a non-qualified practitioner; the parents, however, believing him to be a duly qualified medical man, for how should a poor ignorant Irish labourer know the difference between "Doctors"? "The child died at the end of the second week, and the existence of scarlet fever in the house became known to us only on the registration of the death: too late, in fact, for the mischief was done. The two rooms occupied by this family contained seven persons, viz., the parents and five children. Successively the father and two more children fell sick, and were removed to the hospital, where they are all doing well. The rooms and clothing were disinfected, and the mother and two remaining children were reluctantly compelled to leave the house; but no sooner had they done so than the elder child fell sick, and was sent to the hospital. The mother and her infant are at present well. The day following the burial of the deceased child another family of nine persons left the house. They have been traced, and two children found to be ill. They are tolerably well isolated, however, and seem likely to do well. I am trying, nevertheless, for the sake of the rest of the family, to have them removed. The lessons taught by this story are too obvious to need recapitulation; I will only observe, therefore, what the facts have strongly suggested to my own mind, viz., that among the many requirements in sanitary legislation, none is more needed than power to provide quarantine for the apparently healthy members of poor families in which infectious disease has broken out." The other cases that have occurred up to the present time are too few, and otherwise offer nothing to call for special notice. All the fatal cases occurred in streets wholly occupied by the poorer classes. But, as I observed in my report,—“A principal source of danger in the future lies in the carelessness or ignorance which leads to the premature exposure of convalescents, to which cause several cases have been referred by my correspondents. A case of this kind occurred a short time ago. I ascertained that a boy, who had been ill only a few days and whose skin was actively peeling, had not only, by inadvertence, attended at the waiting-

room of a public dispensary, but had also been to one of the largest and most crowded of our parochial schools, while other members of the same family, and out of the same room, had been in the other departments of the same school, which moreover I found on inspection to be in a very unsanitary condition. I am doing what I can to prevent the recurrence of such a case by putting the teachers of schools on their guard; and, mindful of the steps which the School Board for London took, on our suggestion last year, with a view to to prevent the spread of the malady through the medium of Board Schools, I addressed the Clerk to the Board lately, stating the facts as they are known in this parish, and urging a repetition of the precautions adopted last year; and I have had the satisfaction of receiving a communication from that gentleman to the effect that "the notices on the subject of scarlet fever, issued to the respective teachers in the autumn of last year, will be re-issued to the teachers by the time the various schools commence their work, after the summer holidays."

Before concluding my remarks on this subject, I may mention that I availed myself of the opportunity afforded by sending the circular letter to medical men to place in their hands the "Suggestions for preventing the spread of infectious diseases," and other sanitary notices, pointing out that copies were always available for the use of their patients; asking their co-operation in aid of the efforts which it is at all times my duty to make, with a view to arrest the spread of infectious diseases, urging the importance of isolation of the sick, and the propriety of sending patients to the hospital when the home accommodation does not allow of isolation; offering the services of your sanitary staff in all such cases, and explaining the arrangements made for the disinfection of clothing, etc., in the absence of a public disinfecting chamber. It, of course, remains to be seen to what extent the epidemic will grow, and judging by past experience the disease may during this year and the next be expected to prove fatal above the average, but come what may I have the satisfaction of knowing that no means have been spared, or will be, which it is in the power of your Vestry to adopt with a view to arrest its progress.

Diphtheria.—This disease was the cause of 26 deaths (Town, 24; Brompton, 2), an increase of 15 over 1873—entirely in the Town sub-district. The deaths under five years were 14.

Whooping Cough.—The mortality from this complaint was 45, in the Town sub-district 36, and in Brompton 9. The deaths under five were 44.

FEVER.—*Typhus*, was fatal in 9 cases, all in the Town sub-district. The number in the previous year was 6—all likewise in the Town.

Enteric Fever.—The registered deaths from this disease were 28—viz., 19 in the Town and 9 in Brompton. The numbers in 1873 were 19 and 8 respectively. The term *Typhoid* is often employed to designate this disease, and leads to error in the tabulation of the mortality returns. I have good reason to

believe that some of the cases returned by the Registrar-General as *typhoid fever* were not cases of *enteric fever*, the word *typhoid* having been employed in medical certificates of the cause of death to describe a condition of the patient in the last stages of fatal illness of a nature entirely distinct from *enteric fever*.

Simple continued fever caused 15 deaths (8 under five years), viz., 11 in the Town sub-district and 4 in Brompton. The deaths in 1873 were 7 and 1 respectively in the two districts.

Diarrhœa was less fatal than in 1873, the deaths being in that year 145, and in 1874 only 112. The annual average number in ten years was 111, without allowances for increase of population. The deaths last year in the two sub-districts were 90 and 22; in the previous year 121 and 24. The large majority of fatal cases occurred in infancy, viz., 100 under one year and 8 between one and five. Above 65 years of age the deaths were 4. At intermediate ages there was no death. The principal mortality was experienced in the warm summer weather, viz., in July 38, and in August 31. Five deaths from *Cholera* were registered, viz., 3 in the Town and 2 in Brompton.

OTHER ZYMOTIC DISEASES.—*Croup* was the cause of 26 deaths, 25 under five years, and all save one in the Town sub-district. The deaths in the previous year were 20.

Erysipelas caused 21 deaths, viz., 13 and 8 in the Town and Brompton respectively. The deaths in 1873 were 24.

PUERPERAL MORTALITY.—Some difficulty is experienced in procuring a correct record of the deaths arising out of or connected with childbed, owing to the fact that reference to the previous occurrence of childbirth is sometimes omitted in the medical certificate of the cause of death. Some of the deaths, therefore, registered as Peritonitis, Pyæmia, Erysipelas, and even under less suggestive headings, may have been connected with the puerperal state. The deaths actually ascribed to childbed diseases were 24, other 14 being set down to the various accidents incident to that critical period. These numbers together represent a mortality somewhat below one per cent. (0.87) on the births registered. Dr. Matthews Duncan, the successor of Sir James Simpson at the University of Edinburgh, has promulgated an opinion that the true average mortality of the puerperal state is one per cent, *i.e.*, one death in every hundred confinements; an estimate which a practitioner in this parish, who has a most extensive midwifery practice, tells me coincides with his personal experience. The causes of death as registered were:—*Puerperal fever*, 4; *Puerperal peritonitis*, 9; *Pyæmia*, 5; *Septicæmia*, 1; *Metritis*, 4; *Pelvic cellulitis*, 1. Eighteen of the deaths occurred in the Town sub-district, the mortality being pretty evenly spread over the parish, and none of the cases being traceable to contagion. They occurred in the four quarters respectively as follows—9, 6, 5, and 4. The ages at death were: 20—30 years, 18; 30—40 years, 4; 40 years and upwards, 2.

Syphilis nominally caused 12 deaths—a number we may well believe below the actual mortality from this Protean disease.

CONSTITUTIONAL DISEASES.—*Cancer* was the cause of 67 deaths, viz., 51 in the Town and 16 in Brompton. Fifty-four of the deaths took place between the ages of 45 and 75.

THE TUBERCULAR DISEASES caused 408 deaths, viz., 325 in the Town and 73 in Brompton. *Scrofula* was the registered disease in 27 cases, *Tabes mesenterica* in 53, *Phthisis* in 245, and *Hydrocephalus* or *Meningitis* in 82 cases. The numbers of deaths in the several quarters were—1st, 113; 2nd, 104; 3rd, 88; and 4th, 103:—216 in the winter and 192 in the summer quarters. One hundred and fifty-seven of the deaths were those of children under the age of five years. This mortality is exclusive of those brain affections, *Convulsions*, &c., and those diseases called developmental which, under the names of *Atrophy* and *Premature birth*, are nearly allied to the tubercular diseases specially so-called.

LOCAL DISEASES.—The diseases of the nervous system were fatal in 256 cases, viz., 199 in the Town and 57 in Brompton. Eighty-five of the deaths occurred under five years of age. *Apoplexy* was fatal in 64 cases, *Paralysis* in 47, *Epilepsy* in 13, *Convulsions* in 59, and *Brain disease* in 62. Apoplexy and Paralysis are diseases of old age; Convulsions, as a rule, of infancy. The deaths from this order of diseases were very equally spread over the whole year, the quarterly numbers being 66, 63, 61, and 66 respectively.

THE DISEASES OF THE ORGANS OF CIRCULATION caused 149 deaths, viz., in the Town district 115, and in Brompton 34. Nine only of these deaths occurred under the age of five years. *Pericarditis* was the registered cause in 5 cases, *Aneurism* in 7, and "*Heart disease*" in the remainder, 137.

DISEASES OF THE RESPIRATORY ORGANS.—The deaths from this important order of diseases were 554, viz., 462 in the Town sub-district, and 92 in Brompton. Under five years of age the deaths were 244. The mortality from these affections is greatly influenced by season, more deaths occurring in winter than in summer, and a higher mortality prevailing in proportion as the winter is severe. These facts are illustrated by the subjoined figures, which show the mortality to have been in the four quarters of the year respectively 189, 80, 58, and 227. Thus in the winter quarters the deaths were 416, and in the summer quarters only 138. The deaths in the summer quarters of 1874 were seven less than in 1873; but there was an excess of 78 in the winter quarters of the former year, due to the long-continued cold weather that prevailed in the latter months. The several diseases of this order were the registered causes of death as follows:—*Laryngitis* 6, *Bronchitis* 300, *Pleurisy* 10, *Pneumonia* 176, *Asthma* 12, and *Lung disease* 41. The increased fatality of *Bronchitis* and *Pneumonia* helps to explain the higher mortality of 1874 as compared with 1873.

DISEASES OF THE DIGESTIVE ORGANS were fatal in 118 cases (18 under five years), viz., 93 in the Town and 25 in Brompton. They include *Enteritis* 19, *Peritonitis* 20, and *Liver disease* 37.

DISEASES OF THE URINARY ORGANS were fatal in 51 cases, including *Kidney disease* 12, *Bright's disease* 22; *Cystitis* 7, and *Diabetes* 5.

DISEASES OF THE ORGANS OF GENERATION caused 7 deaths, 6 of them registered as *Uterus disease*, &c. These deaths are exclusive of malignant affections of the organs included under the head of Cancer.

THE DISEASES OF CHILDREN were fatal in 75 cases, including *Premature birth* 46, *Teething* 25, and *Malformations* 4.

THE DISEASES OF ADULTS include 14 deaths returned as *Child-birth*, these deaths being irrespective of those already alluded to under the head of Puerperal Fever.

DISEASES OF OLD PEOPLE (so described) were returned under the head of *Old Age* as the cause of 94 deaths.

DISEASES OF NUTRITION, viz., *Atrophy* and *Debility*, were the cause of 163 deaths, all under five years of age, (153 in the first year of life) viz., 143 in the Town sub-district and 20 in Brompton.

VIOLENT DEATHS, 48 in number, were registered, including 10 due to *fractures and contusions*, 17 (all under one year) to *suffocation*, and four to *drowning*.

CAUSES NOT SPECIFIED OR ILL-DEFINED.—Twenty deaths registered came under this description.

DEATHS IN PUBLIC INSTITUTIONS.

THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST. At this important institution 131 persons died, viz., 80 males and 51 females. All the deaths, with the exception of eight, were due to that hitherto incurable malady phthisis, or as it is popularly known, consumption. Five deaths were caused by heart disease, one by aneurism, and two by lung disease. The deaths in the four quarters respectively were 26, 30, 30, and 45. Six only of the deaths properly belong to the parish. Seventy-five of the deceased came from other parishes in London and the suburbs, and 50 from other than metropolitan counties. If the truth were known, it is not improbable that some few deaths from phthisis outside the hospital properly belong to other districts, the patients having come to town for medical treatment attracted by the fame of the institution, and being attended as out-patients.

ST. JOSEPH'S HOUSE.—This large charitable establishment of the Roman Catholics, situated in Portobello Road, Notting Hill, is not classed as a public institution, although its inmates (about 200) are drawn from all parts. The deaths last year numbered 36—males 21 and females 15—all above 60 years of

age, and due to the more common diseases of senility, as Brain disease 8, Lung and Heart disease 16, Cancer 3, Intestinal diseases 3, "Old Age" 2, other diseases 4.

THE PARISH INFIRMARY.—At this large and important hospital there were 221 deaths, viz., in the four quarters respectively 61, 40, 44, and 76; males 117, females 104. The deaths included 37 of infants under one year of age, and 86 of persons above 60 years of age, viz., between 60 and 70, 36; 70—80, 38; 80—90, 11; at 97, 1. Inquests were held in three cases, the verdicts returned being (1) "Sudden, apoplexy, natural causes," (2) "Fall from a window, accidental," (3) "Fall from a ladder, accidental."

The causes of death may be summarised thus :—

Brain disease, Apoplexy, Paralysis, &c.	..	26
Lung diseases .. .. .	..	37
Heart disease .. .. .	..	7
Scrofulous or Tuberculous diseases, Phthisis, &c..	..	41
Wasting diseases, Debility, &c., of Children ..	..	21
Atelectasis (Imperfect expansion of lungs at birth)		5
Cancer .. .. .	..	8
Enteric fever .. .. .	..	2
Measles .. .. .	..	4
Diarrhœa .. .. .	..	3
Intestinal diseases, &c. .. .. .	..	13
Kidney disease .. .. .	..	4
Uterine diseases .. .. .	..	2
Ulcer .. .. .	..	3
Childbirth, &c. .. .. .	..	3
Violent 2. Privation 1. .. .. .	..	3
Old Age .. .. .	..	23
Various .. .. .	..	16
Total ..		221

INQUESTS.

A large proportion of deaths form the subject of enquiry in the Coroner's Court. Last year the number was 172, viz., 152 in the Town sub-district and 20 in Brompton, equal to 6·4 per cent. of the total deaths. One hundred of the subjects of enquiry were below the age of five years, 80 being less than a year old, mostly in fact infants of a few hours, days, or weeks. Forty-eight inquests were held on persons between the ages of 5 and 60, and 24 on persons above the age of 60. The great majority of the deaths were due to disease. Thus of the 99 sudden deaths the causes of death as found by *post mortem* examination (and *post mortem* examinations were made in 154 out of the total of 172 cases) were as follows :—

Brain, Diseases of the	..	..	13
Apoplexy	..	..	11
Lungs, Diseases of the	..	..	24
Heart " "	..	..	20
Scrofula	..	..	4
Convulsions	..	..	4
Spasm of the Glottis	..	..	7
Diarrhoea	..	..	3
Diphtheria	..	..	2
Syphilis	..	..	2
Premature birth and infantile debility	..		3
Visceral diseases (of Liver, Kidneys, &c.)			3
"Fever" 1; Thrush 1; "Sudden" 1	..		3
Total			99

Various diseases were specified in other six cases in which the deaths were not returned as "sudden." Death was found to be caused by disease in many of the cases in which the deceased were "found dead," either in bed or otherwise, viz., from

Lungs, Diseases of the	..	6
Heart " "	..	6
Convulsions	..	4
Brain, Diseases of the, 2; Apoplexy 1	3	
Laryngitis 1; Spasm of the Glottis 1	} 3	
Scrofula 1		
"Found Dead," &c.	..	4
Total		26

The accidental and violent deaths were caused as follows:—

Falls	..	7
Burns	..	1
Drowned	..	4
Suffocation	..	16
Cut throat	..	2
Pistol shot	..	2
Hanging	..	2
Run over by railway train		1
Wilful Murder	..	4
"Accident," "Violence"		2
Total		41

With respect to the accidental or violent deaths it may be remarked that the 16 from suffocation were of infants and due to "accident." One of the newly born infants was found in a box and another up a chimney; these being, as were some of the others, the children of single women. On four newly-born

children the verdict of "murder" was found. In one case there had been "exposure," in a second the child was found dead, and in the other cases the verdict was simply "wilful murder." Of the four drowning cases one was suicidal. By hanging, cut-throat, and pistol-shot all the deaths recorded (two from each cause), were suicidal, making a total of seven suicidal deaths during the year. The remaining deaths by violence were accidentally caused.

Having carefully analysed the facts relating to these deaths as they appear in the weekly returns of mortality, I submit the results, which are, I think, worthy of attention. Of course the primary cause of an inquest being held is the absence of a medical certificate showing the cause of death. The reasons why certificates are not forthcoming, and therefore why inquests become necessary, may be inferred from certain particulars which appear in the returns, and may be summed up as follows : —

Sudden Death	..	..	..	99
Found dead in bed (22) or otherwise (26)				48
Accident	..	..	..	3
Violence	..	..	..	15
Doubtful (none of the above reasons stated)				7
Total ..				172

It is to the deaths from disease that I would draw particular attention, the bare facts appearing to point to a large amount of neglect of the sick, which, without explanation, would seem to border on the criminal. Fatal visceral diseases, it need hardly be said, present symptoms which the most ignorant cannot altogether overlook—fever, pain, exhaustion, &c.; and each disease has a more or less prolonged course, varying with the importance of the organ affected, and with the amount of care bestowed on the sufferer. It is not credible that any medical man would be unable to diagnose the existence of such a disease, *e.g.* as pneumonia, or would refuse to certify the cause of death of a patient who had died under his care. We are driven to the conclusion, therefore, that, in a great number of cases of disease, many of the victims being infants, no effort is made to obtain medical advice for the sufferers, and hence, when death ensues, an inquest becomes necessary, as there is no medical certificate to show the cause of death. A post-mortem examination is made, and then it becomes known that death was caused by a disease that might have been cured, and that certainly must have had a well-defined and often a lengthened course. Passing over such maladies as apoplexy and heart disease, it is only necessary to mention, in support of this view, such diseases as pneumonia, &c. (30 deaths); brain diseases (15); convulsions—a symptom rather than a disease (8); scrofula (5); syphilis (2); diarrhoea, diphtheria, &c. The question then arises, in connection with such cases as these, whether it is sufficient to record the cause of death? whether, in

fact, some one should not be made responsible for the neglect to provide medical advice for a child who ultimately dies "suddenly" or is "found dead" as a consequence of an attack of pneumonia, that may have extended over one, two, or three weeks, or even a longer time? Not many weeks before this present writing one of the "Peculiar People" was found guilty of manslaughter, having neglected to provide medical attendance for his child, who died of pneumonia, although it was admitted that every care, otherwise, had been bestowed on the patient; and, notwithstanding the well-known fact that with such care a very large proportion of the cases, especially if one lung only is affected, will recover. It need scarcely be added that the parents' neglect had its origin in conscientious motives, however mistaken and absurd. Can such a plea be made in all or many of the cases to which I have here alluded: and should negligent parents escape without punishment—without censure even?

True, the facts I have thus briefly brought under notice may be explained—and they certainly need explanation; for as they baldly appear in the returns of mortality they would seem to indicate an indifference to life which is not only shocking, but may be in some degree the cause of that terrible infantile mortality which all thinking persons deplore. I will only add that it is notorious that medical men are constantly called in to see children sick beyond the hope of recovery, in order that no fuss may arise after death—the death certificate being all-sufficient. No doubt in many cases, where the diagnosis is quite clear, the certificate is given, although the practitioner may be conscious of the neglect of the parents in applying for assistance when "too late;" and, I dare say, that in some at least of the cases which come before the Coroner the inquest has been brought about by the judicious refusal of medical men to give certificates under such circumstances. I venture to think, however, that a certificate should not be given in any such case, and that not only should an inquest be held, but that the mere fact of the responsible person in charge of the infant having failed to obtain that medical advice and assistance which the poor may have for the asking, should be regarded as establishing a *prima facie* charge of neglect, for which he or she should appear and answer at another tribunal in the absence of exculpatory evidence.

DEATHS "NOT CERTIFIED."

The number of deaths "not certified," that is, of persons who were attended in their last illness by non-qualified practitioners—generally professing to hold unregistrable foreign degrees, often obtained by purchase, *in absentia*, was 33. The numbers in the two previous years were 30 and 21. In my annual report for 1872 I mentioned that I had some time previously called the attention of the Registrar-General to the desirability of an addition to the form of certificate of death provided for the use of medical men,

whereby it would be made clear whether the subscriber was or was not duly qualified, *i.e.*, registered. The Registrar-General approved the suggestion, and his attention having, at my instance, been again directed to the subject by the Society of Medical Officers of Health last year, he has, in the new form of certificate brought into use at the commencement of the current year, added a line immediately below the place for signature on which the subscriber is required to enter his "registered qualification." It is not probable that any unregistered practitioner would venture to use the certificate, should he inadvertently become possessed of it, as might happen through the almost unavoidable ignorance in which the sub-district registrars are left, from the want of an official list of registered practitioners. Not long ago I ventured to direct the attention of the Registrar-General and the Registrar to the General Medical Council to the importance of these officers being supplied with the Medical Register, issued annually by the Council; but these gentlemen, while appreciating the suggestion, were unable to hold out any hope that it would or could be carried into effect, inasmuch as the Government are unwilling to incur the necessary expense, and as the Register is too inaccurate to be implicitly relied on in doubtful cases. But now that medical men are required, under a penalty for neglect, to give certificates of the cause of death, some means ought to be found of restricting the use of them in any form, to registered practitioners. The sub-district Registrars do not knowingly accept a certificate from a non-qualified practitioner, but in some cases where a medical title is used by a stranger, "invalid" certificates obtain currency. In all other irregular cases the registrar returns the death as "not certified," making use, nevertheless, of the information as to the cause of death contained in the certificate! If it were made an offence at law for any unregistered practitioner to give a certificate of death, the difficulty would probably be met. At present I do not know what course would be best to adopt, unless to hold inquests on the bodies of all persons who die under the treatment of non-qualified practitioners. This course was adopted in some cases in the northern part of the parish last year, and it led, in at least one instance, to the unsatisfactory, not to say discreditable result, of the Philadelphian M.D. who attended a sick child, calling in a registered practitioner at the last gasp, so that he might certify to the cause of death. An inquest, however, was held on the body, and the death was found to be due to quite a different disease to that entered in the certificate. I may add that the Board of Guardians, laudably anxious to put a stop to the scandal, took proceedings at the Hammer-smith Police Court against an unregistered practitioner for signing a vaccination certificate, and thus "falsely pretending to be registered." The case was dismissed, however, and no further steps have been taken in the matter. But something should be done for the protection of the poor, who are

almost exclusively the patients of the unqualified man, being unable to realize the distinction; and action is rendered the more necessary by the fact that children—infants of tender age—are most commonly the victims of the practice. Thus, of the 33 cases of uncertified deaths referred to, 25 were children, of whom 18 were less than one year old. The causes of death returned included such diseases as typhus fever, scarlet fever, measles, diarrhoea, inflammation of the lungs and of the brain, and scrofulous maladies.

METEOROLOGY.

The mean temperature of the air at Greenwich during the registration year was $49^{\circ}4$ F., the average of 35 years being $49^{\circ}3$. The averages of the four quarters were $41^{\circ}6$, $53^{\circ}5$, $60^{\circ}6$, and $41^{\circ}8$. The hottest week was that which ended on the 11th of July, mean temperature $66^{\circ}8$; and the coldest week was that ended on the 2nd of January, 1875, mean temperature $28^{\circ}8$. The highest reading of the thermometer was on the 9th of July, $92^{\circ}0$, and the lowest on the first day of the current year $18^{\circ}2$. The dryness of the atmosphere (*i.e.*, the difference between the dew point temperature and air temperature) was $5\cdot6$ (average in 30 years $5\cdot5$). The rainfall was $24\cdot1$ inches.

VACCINATION.

I am indebted to Mr. Shattock, the energetic Vaccination Officer, for the interesting particulars contained in Table IX, (Appendix), on the important subject of Vaccination. From it we learn that during the year 4,357 births were returned to him by the sub-district registrars, and that the successful vaccinations numbered 3,588. Twenty-three infants were certified as insusceptible of successful vaccination; in 74 cases the postponement of vaccination was sanctioned by medical certificate on account of the state of health, &c.; 27 children were removed to other districts, the vaccination officer of each district being duly apprized of such removal; 9 cases were still under proceedings (at the date of the report), by summons or otherwise; while 464 children died unvaccinated. The cases unaccounted for—either through the removal of the children to places unknown, or which cannot be reached, and cases not having been found—amounted in all to only 172, or a fraction below 4 per cent. of the total births—a result that must be considered very satisfactory, highly creditable to the vaccination officer, and, I would add, to the Board of Guardians; while I can hardly believe it has been surpassed in any other district of the Metropolis.

The Guardians have lately (August, 1875) prosecuted successfully a non-qualified practitioner for signing Vaccination Certificates. A penalty of Ten pounds was inflicted; the offence with which the defendant was charged being that of “falsely pretending to be registered” under the Medical Act, none but registered practitioners being qualified to sign Vaccination Certificates.

SANITARY WORK.

Table 6 (Appendix) contains a summary of the principal items of sanitary work accomplished during the Vestry year ended 25th March, 1875. The number of complaints received and entered in the complaint book was 1,482; viz., 820 in the North, and 662 in the South Sanitary District. Seven thousand two hundred and eighty-six houses were inspected—viz., 3,229 in the North, and 4,057 in the South district, besides mews, of which there are about 140 in the parish. The number of sanitary notices served for the amendment of houses, premises, &c., was 1,438, viz., 756 in the North and 682 in the South: 1,477 houses and premises were cleansed, &c.: 68 were disinfected after infectious diseases. The drains of 442 houses were cleansed and repaired; and trapped and ventilated in 341 other cases: 463 privies and water-closets were repaired and supplied with water; and 6 new water-closets were provided: 31 new dust-bins were erected, and 41 old ones covered, repaired, &c.: 8 water-cisterns were constructed, and 75 cleansed, covered and repaired—a very inadequate number it would seem, so far as regards cleansing, only that in a great number of cases this operation—so commonly neglected—was directed and carried out without formal notice: 115 accumulations of dung, stagnant water, animal and other refuse were removed, and in 58 cases animals improperly kept, or kept in unfit localities (swine especially), were removed.

The number of inspections in each district, and in each period of four weeks, covered by my monthly reports, may be seen in Table 6A. Legal proceedings were had recourse to in 100 cases, viz., 82 in the North, and 18 in the South district, and generally with a successful result. A few of the cases deserve special notice.

And first I will mention the subject of boiling food for pigs. A greater nuisance than this is, it would be difficult to imagine in a parish like Kensington. The effluvia given off from the boiling of a quantity of animal and vegetable refuse, collected from the wash-tubs, and often in a semi-putrid state before cooking, is sickening and offensive to the last degree. It constitutes by far the greater part of the nuisance arising from the keeping of swine in an improper locality; and the efforts persistently made during the last four years to improve the condition of the Potteries have been sadly marred by the continuance of the process of food collection and preparation, which still goes on to some extent, although nearly all the swine have been removed. As no means were ever adopted to prevent the escape into the air of the noxious effluvia resulting from the cooking, we resolved to attack the nuisance under the 27th section of the Nuisances Removal Act, which enacts, in effect, that "If any building, or place for boiling offal . . . or used for any trade, business, &c., causing effluvia, be at any time certified to the local authority by any Medical Officer to be a nuisance or injurious to the health of the inhabit-

ants of the neighbourhood, and that the person carrying on such business shall not have used the best practicable means for abating such nuisance, or preventing or counteracting such "effluvia," the person so offending shall, upon a summary conviction for such offence, forfeit and pay a sum of not more than Five Pounds nor less than Forty Shillings, and upon a second conviction for such offence the sum of Ten Pounds, and for each subsequent conviction a sum double the amount of the penalty imposed for the last preceding conviction, but the highest amount of such penalty shall not in any case exceed the sum of Two Hundred Pounds." Several prosecutions were undertaken successfully—fines [varying from Forty Shillings to Five Pounds (including costs) being inflicted. The steps already taken will, it is hoped, prove sufficient, and render unnecessary any further appeal to the law, especially as a notice of your Vestry's intention to proceed against offenders in every case has been widely distributed in the Potteries.

Twenty-four convictions were obtained against old offenders for keeping swine in an improper locality, and Mr. Bridge, one of the magistrates at the Hammersmith police-court, announced his intention of throwing on the defendants in any future cases that might be brought before him, the onus of proving that the pigs were not on the premises on days intervening between the days for which the defendants might be summoned for the offence of keeping pigs in a place under the ban of a "prohibitory order," the penalty for this offence being Ten Shillings a day. Hitherto we have been required to prove the presence of swine on each day, so that, for example, to obtain in one week penalties to the amount of three pounds, it was necessary to visit the prohibited premises every day in the week. But if Mr. Bridge should feel justified in carrying out his views, it would only be necessary to visit the premises on Monday and Saturday to obtain the same amount of penalties which would be imposed, unless the defendant should be able to prove that the pigs were not on the premises on the intervening days, viz., Tuesday, Wednesday, Thursday, and Friday.

The proprietor of a licensed slaughter-house in the Potteries, Notting-hill, was fined in the sum of Ten pounds and costs for having on the premises the carcase of a cow, diseased and unfit for human food. The cow had been brought dead from another place, and after seizure it was stated that the carcase was not intended for food. But it was dressed in the usual way, and the meat having been condemned by Mr. Ingham, proceedings were taken before Mr. Bridge, with the result above stated, the magistrate ruling that the fact of the carcase being in the slaughter-house was sufficient evidence of the intention to pass it off as food for man. The cow, it may be added, having died, or been killed, at a licensed cow-shed in the same locality, I pointed out to the licensee the great impropriety of his proceedings, and the risk he would run of losing his license, to say nothing of other consequences, on a repetition of his indiscretion. Subsequently, I received notice from the proprietor of a licensed slaughter-

house that the carcase of another cow that had been killed in the last stage of the "lung disease" (pleuro-pneumonia) was awaiting my opinion of the fitness, or otherwise, of the meat for human food. I condemned the meat, which was removed to a knacker's yard. No proceedings were taken in this case, but I cautioned the licensee not to admit diseased animals—living or dead—on his premises at any future time. Some time after the occurrence of this case I learnt, to my great surprise, that the instructions issued by the Metropolitan Board of Works, to the district veterinary cattle inspectors under the provisions of the Contagious Diseases (Animals) Act authorised the removal of diseased cows from cowsheds to a licensed slaughter-house for the purpose of being killed; or if killed at the shed, of being dressed, there to await the *fiat* of the inspector as to the fitness, or otherwise, of the meat for human food. This instruction seems to be at variance with the slaughter-house bye-laws, to say nothing on the question of the propriety of using for food the flesh of diseased animals. In the provinces it is the practice, I believe, to destroy and bury animals affected with pleuro-pneumonia; and I am under the impression that heavy fines have been inflicted on persons for selling or exposing for sale the flesh of such animals. In London cowkeepers are required, under a penalty for neglect, to give notice to the Metropolitan Board of Works of the occurrence of cases of pleuro-pneumonia; and they are entitled to compensation from the Board to the extent of a moiety of the value of any animals that may be killed with a view of "stamping out" the disease. It follows that the larger the amount realized by the sale of the carcase, for whatever purpose, whether for the food of man or of cats, the less is the amount payable to the owner in the way of compensation.

The proprietor of the slaughter-house in the Potteries first referred to above, was fined Five pounds and costs for allowing a large accumulation of putrid blood, &c., to remain on the premises after his attention had been repeatedly called to the necessity of properly storing and regularly removing all such matters before they became offensive.

A seizure of meat unfit for human food was made at Norfolk Terrace—at a mis-called "co-operative" store—and the defendant was fined Twenty pounds and costs.

A person who had formerly kept a licensed cow-shed was fined Forty shillings and costs for keeping cows for dairy purposes without a license.

A somewhat serious nuisance having been complained of, arising at an iron foundry at Notting Hill, from the escape of noxious fumes and grit from the low but capacious chimney above the melting furnaces, I gave a certificate to the effect necessary to found legal proceedings, which, however, were not had recourse to, the proprietors of the foundry having expressed their willingness to adopt any measures I might advise, with a view to remove

the cause of complaint. They have done this by carrying up the shaft some 20 feet, and by the interposition of diaphragms to intercept the fine grit carried up by the draught; and I hope that in the result these measures will be found adequate for the purpose.

LICENSED SLAUGHTER HOUSES.

The licensed slaughter-houses—49 in number—viz., 28 in the North Sanitary District, and 21 in the South, have been duly inspected. In my last annual report I gave some account of the Slaughter Houses (Metropolis) Act, 1874, under which the Metropolitan Board of Works, as the “local authority,” were empowered to frame bye-laws, for regulating the conduct of the business of a slaughterer of cattle, and the structure of the premises in which the business is carried on. As it was impossible to get the bye-laws framed and confirmed by the Local Government Board previous to the annual licensing day in the month of October (as a matter of fact they were not confirmed until the 27th of May in the present year), your Vestry, on the recommendation of the Sanitary Committee, unanimously resolved that certain conditions were essential in order to fit a slaughter-house for the business, and decided to oppose the renewal of licenses in every case that did not come up to the standard. The conditions were as follows :

1. A slaughter-house should have an independent entrance, so that the cattle may not have to pass through the house or shop; and it should be at a reasonable distance from other buildings, particularly inhabited houses.
2. It should be open to the roof; or, at least, should have no inhabited rooms over it.
3. It should be well ventilated and properly lighted, so that the slaughtering may be done, as it always should be, with closed doors.
4. It should have walls and floor of smooth and impervious materials—the flooring being laid on concrete.
5. It should be well drained, with stone ware pipes, and the drains should be permanently trapped.
6. It should have attached to it ample and separate lairage, constructed with a due regard to sanitary and other requirements.
7. It should be effectually separated from any lair, stable, dung-pit, w.c., &c., so that the meat may not be exposed to any offensive effluvia.
8. It should be of adequate size, and should not be used for any other purpose than that for which it is licensed, and particularly it should not be used as a stable, a lair, or a cow-shed.

Upon viewing the several slaughter-houses by this standard, so many were found defective in one or other respect that it was thought best to give the formal notice of opposition required by the Act, in every case, but your Clerk and myself were directed to oppose the renewal of the license in those cases only that did not

come up to the standard. We did this, but the justices overruled our objection in every case, on the ground that the premises, however faulty, had been licensed in former years, and time must be allowed to put them in proper order. At the same time, the justices gave the assembled licensees notice that at the next licensing day (in October of the current year, namely) they would not renew the license in any case that was not up to the standard. With reference to the decision of the magistrates, and the ground on which it was based, it is, perhaps, hardly necessary for me to state the fact, so well known already, that the existing slaughter-houses, were, without exception, licensed before I entered upon the duties of my appointment, and that the reason your Vestry did not oppose the renewal of the licenses in either of the subsequent years was that, in common with myself, you believed that the private slaughter-houses would be finally closed in 1874, under the operation of the Building Act, 1844. It only remains to add that the slaughter-houses will now have to be judged by the standard of the bye-laws; and it may therefore be useful to state in what respect the bye-laws differ—either in excess or defect—from the standard adopted by your Vestry in 1874. As regards new slaughter-houses, the requirements of the “local authority” are fully up to that standard; and, as regards existing slaughter-houses, the only material differences between the bye-laws and the standard relate to the points dealt with in clauses 1 and 6 (*supra*). The bye-laws do *not* require that a slaughter-house shall have an independent entrance, or be at all removed from other buildings; and they do *not* require provision to be made for housing cattle previous to slaughtering; but it is enacted that no animal shall be detained on the “premises” for a longer time than “absolutely necessary” previous to slaughtering, and that the “slaughter-house” (which is only a part of the “premises”) shall not be used for “any other purpose than that for which it is licensed,” viz., killing. It follows, then, that the slaughter-house itself may not be used as a lair, and the question arises—Where shall the animals be kept, if there be no lairage? It appears to me that the existence of lairage is assumed, and that the absence of this necessary accommodation would form a reasonable cause for opposition even under the bye-laws. But whether this is so or not, I venture to think that your Vestry would be fairly entitled to oppose the renewal of a license in the case of premises so obviously defective, and that you would be fully justified in taking the opinion of the justices as to the suitability of premises for a slaughter-house to which there is no access save through a butcher’s shop or dwelling-house.

(The Vestry subsequently adopted these views. I here subjoin a synopsis of the bye-laws, which I have prepared for the guidance of the Sanitary Inspectors.)

OBJECTS OF THE BYE LAWS:—To regulate the conduct of the

business of a slaughterer of cattle, and the structure of the premises on which such business is carried on, and the mode in which application is to be made for sanction to establish such business anew.

DEFINITIONS.—The Metropolitan Board of Works, as the “Local Authority,” is styled the “Board.” “The premises” include the Slaughter House and all the premises used for the business of a slaughterer of cattle. The “Slaughter House” means the portion of the premises used for the slaughtering and dressing of cattle. The “Occupier” means the occupier of premises where the business of a slaughterer of cattle is carried on; and “Slaughterer of cattle” means a person whose business it is to kill any kind of cattle for the purpose of its flesh being used as Butchers’ meat.

BYE-LAWS AS TO THE STRUCTURE OF THE PREMISES, (Nos. 15 to 21 inclusive.)—The slaughter house to be well paved with asphalt or flagstone set in cement, laid with a proper slope and channel towards a gully, and effectually drained by an adequate drain of glazed pipes communicating with the public sewer. The gully to be trapped by an appropriate trap and covered with a grating, the bars of which to be not more than $\frac{3}{8}$ of an inch apart (16).

The inner walls of the Slaughter House to be covered with hard, smooth impervious material, to the height of four feet at the least, and to be always kept clean, and in good order, and repair (17).

No room or loft to be built by owner or occupier over any Slaughter House (20).

An adequate tank or other proper receptacle for water and water supply to be provided, and so placed that the bottom of the same shall not be less than 6 feet above the floor level (15).

The Slaughter House to be well and thoroughly ventilated (15).

No water closet, privy, cesspool, urinal, or stable to be within, or to communicate directly with the Slaughter House (19).

The occupier to cause all needful works and repairs to the premises to be forthwith done and executed, as and when the same shall become requisite, and not to make any alteration in respect of the paving, drainage, ventilation, or water supply, to, or in the premises, without the consent of the “Board” (18).

PENALTIES.—For breach of any of the bye-laws, 15 to 20 inclusive, whether by omission, commission, or neglect, £5; and in the case of a continuing offence, the sum of £1 for every day during which such offence is continued after a conviction for the first offence (21).

BYE-LAWS AS TO THE CONDUCT OF THE BUSINESS (Nos. 1 to 14 INCLUSIVE :—The inner walls of the Slaughter House to be always kept clean and in good order and repair; and the internal surface of the roof and upper portions of the walls to be washed with quick-lime at least once in every three months (6).

The Slaughter House to be thoroughly washed and cleansed within three hours after the slaughtering is completed (7).

A sufficient number of tubs, boxes, or vessels, formed out of proper non-absorbent materials, with tight and close fitting

covers thereto, to be provided for the purpose of receiving and carrying away all manure, garbage, offal and filth, and these products to be placed in the tubs, &c., immediately after the killing and dressing of any cattle. Blood to be put into similar but separate tubs, &c., and all such tubs, &c., with their contents to be removed from the premises within 24 hours (5).

The fat of any animal slaughtered to be kept freely exposed to the air until its removal from the premises; and all such fat, and also hides, skins, and tripes to be removed within 24 hours after the slaughtering is completed (9). Carcase, bone, hide, skin, and all meat, fat, offal, blood, garbage, and other articles, to be removed before the same have become putrid or offensive (10).

Every covered and other receptacle used in the Slaughter House to be kept cleansed and purified so as to avoid any offensive smell (8).

Cattle not to be kept in the "premises" except for the time absolutely necessary previous to slaughter (1). The Slaughter House not to be used for any purpose other than that for which it is licensed; and slaughtering not to be conducted within public view (4).

No animal that is not intended or fit for human food to be slaughtered in the premises (1); and if any diseased cattle should be brought to the Slaughter House, the occupier to give information thereof, forthwith, to the "Board," and to the cattle inspector for the district, with all particulars in his knowledge as to where, from whom, and from what place it was received (11).

No fowl, pig, or other animal used for human food (except cattle about to be slaughtered), and no dog to be kept in or about the premises (2).

No room situated over the Slaughter House to be inhabited under any pretence whatsoever (3).

All persons lawfully entitled to admission to have free access to the premises during the times of slaughter and at all reasonable hours (12).

PENALTIES.—For breach of any of the Bye-laws, 1 to 12 inclusive, whether by omission, commission, or neglect, £3; and in the case of a continuing offence, £1 for every day during which such offence is continued after a conviction for the first offence; and every Court of Summary Jurisdiction, having Jurisdiction to hear and decide complaints of the breach of the Bye-laws, may by Summary Order suspend or deprive any occupier of a Slaughter House altogether of the right of carrying on any such business, as a penalty for the breach of any one of these Bye-laws (13-14).

AS TO THE MODE IN WHICH APPLICATION IS TO BE MADE FOR SANCTION TO ESTABLISH ANEW THE BUSINESS OF A SLAUGHTERER OF CATTLE.—THE APPLICANT to furnish the "Board" with a plan of the premises and sections of the building in which it is proposed to carry on such business, drawn to a scale of a quarter of an inch to the foot, and showing the provision made, or proposed to be made, for the drainage, lighting, ventilation, and water supply of the

same; and also to furnish a key plan of the locality, showing the buildings and streets within 100 yards of the premises, drawn to a scale of five feet to the mile (22).

Notes.—It is required that the Slaughter House, in respect of structure, be brought into conformity forthwith with the Bye-laws (15 to 20); when this has been done, the Bye-laws, (1 to 12), which relate to the conduct of the business, will principally engage attention. The points to which attention will have more especially to be given are those that apply to—

1. The daily and quarterly cleansing.
2. The provision and condition of impermeable and covered vessels for the reception and removal of blood, offal, &c.
3. The exposure to air of fat, and the regular removal of all parts of animals, including blood, offal and manure, before the same become putrid or offensive.
4. The exclusive use of the Slaughter House for slaughtering. (It may not be used as a lair, or as a stable, or as a cart shed).
5. The exclusion from the "premises" of fowls, pigs, dogs, &c.
6. The detention in the premises for so long only as absolutely necessary of animals about to be slaughtered.

The "Occupier," it may be added, is the party responsible for the due execution of the Bye-laws.

LICENSED COW-SHEDS.

The licensed cow-sheds, 33 in number—viz., 17 in the North and 16 in the South district—have been regularly inspected. Your Vestry, after a careful consideration of the subject, and after making enquiries as to the practice adopted in other districts, have adopted a standard of capacity to be complied with in respect of cow-sheds, viz., an allowance of 800 cubic feet of space for each cow, no height of shed above 16 feet to be reckoned in the computation of cubic space; each single stall to be 4 feet, and a double stall for two cows, 7½ feet in width. It is to be desired that steps should be taken to obtain powers to frame bye-laws for regulating the structure of cow sheds, the same as slaughter-houses. Great improvements are necessary in many of the cow-sheds; some of the sheds are, in fact, ill-adapted for the purpose, and in the category I would include those that are not open to the roof—being, in fact, imperfectly ventilated stables. The importance of properly constructed—which means well drained, well paved, well lighted, and well ventilated—cow-sheds, is becoming better understood every year, and events to which reference has already been made (p. 10 *ante*) are likely to give an impetus in the direction of bringing cow sheds under much more strict supervision, as to construction and management than heretofore. It is not uncommon to hear complaints of offensive smells from cow-sheds, even where the premises are very well kept, and where the smell is really not greater than must needs be expected, regard being had to the number of cows kept, and the removal of

manure, &c. Should cow-sheds become the subject of legislation, and precise regulation thereunder, it would be desirable to provide for a notice being posted, outside the premises, some days before the annual licensing day, the same as is done in the case of public-houses, and as ought to be done in respect of slaughter-houses, so that householders in the vicinity might, if necessary, attend and show cause against the renewal of the license.

BAKEHOUSES.

The bakehouses, 108 in number—viz., 60 in the North and 48 in the South district—have been regularly inspected during the year, and the provisions of the Act relating to them carried out as efficiently as circumstances would admit.

Complaints arising out of the neglect of Contractors to fulfil the duty of

DUST REMOVAL

occupied, as usual, an inordinate amount of time in the way of inspection, correspondence and clerical work, the letters, and other communications received during the year being 5,891, viz., 2,560 in the North, and 3,331 in the South district. The actual number of complaints was 1,010, viz., 357 in the North, and 653 in the South contract district; while the orders issued for the removal of dust were 10,177, viz., 3,868 in the North District, and 6,309 in the South. The vexatious difficulties attending this important question led your Vestry to consider again the possibility of dispensing with the assistance of contractors; but no result has hitherto come out of the trouble that was taken by a Committee and by the Clerk of the Vestry to solve the difficulty. The same as with respect to the mortuary and the disinfecting chamber, the lack of a suitable site for the storing of the dust in the intermediate stage between the dust-bins and the final disposition of their contents, has practically rendered nugatory all the labour bestowed on the question. Towards the close of the contract year the complaints became so numerous that your Vestry not only employed a staff of horses, carts, and men to make up for the deficiencies of the contractor (and at his expense) but, also, imposed heavy pecuniary penalties. A somewhat curious result of this strictly equitable and, in fact, unavoidable severity was, that the new contractors for the North district expressed unwillingness to sign the contract, and did not sign it for a period of three months, during which time, as they preferred to set about their work in their own way, which only brought matters right after a considerable interval, the complaints in this district became very numerous, and the difficulty experienced in the first quarter of 1875 in the South district, was, in the second quarter, transferred to the North. But as not seldom happens, so in this case—out of evil came good, for your Vestry temporarily appointed, at my request, a Dust Inspector, whose services having given satis-

faction, and proved very useful, have been permanently retained, thus affording a very much needed accession to the strength of the sanitary staff at my disposal.

DOMESTIC WATER STORAGE.

Next to the unwholesomeness of houses arising from the neglected state of dust bins—to whatever cause the neglect may be attributable—no subject, perhaps, so often engages the attention of Sanitary Inspectors as that of water supply and the neglected state of cisterns. It would almost seem as if many householders thought that the water supply needed no more attention than that of gas, which is usually comprised in a quarterly settlement with the collector. Months and probably years elapse in some cases without any attention being paid to the condition of cisterns which, I need hardly say, ought to be cleaned out periodically, and not less frequently than once a month. It is true that the inconvenient position in which the cisterns are sometimes placed occasions difficulties in getting at them, which may in some measure account for the neglect. But in other cases where no such difficulty exists the result is the same. One among the “water regulations” by which the Companies are almost constituted a sanitary authority, and which might be enforced with public advantage, relates to the position of cisterns which are required to be placed in accordance with their views. This regulation is of a retrospective character, but so far as I know it is not carried out. Another valuable regulation would abolish the “waste pipe”—a fertile and unsuspected cause of foul water, and, in many cases of illness, being often untrapped and then serving as a ventilator to the drains, giving exit to noxious gases which the water absorbs freely. But I cannot say that I have heard of any instance in which the Companies have exercised their powers in this respect—powers, be it understood, claimed by and conceded to them, not on sanitary grounds, but simply to prevent the waste of water. It is one of my most often repeated instructions to the Inspectors to view the apparatus for water supply when making a house inspection, and to abolish waste pipes whenever practicable. Another regulation has for its object, to prevent waste of water, by the intervention of a service box for the supply of the water closet, thus limiting the discharge at each elevation of the lever to a maximum of two gallons. This regulation I have no doubt is carried out in the case of new houses; but it is perhaps of even more importance in old ones, in which, as too often happens, the domestic and the closet service are drawn from one and the same cistern. In a special report (November 20, 1872) I referred to all these points, and to many others, and I have seen no reason to modify the expressions of regret with which I then had occasion to speak of the stringency of the regulations, which is, I apprehend, the main, if not the sole cause of our being still without the constant system of water supply which it was supposed the Act of 1871 would give us. The stringency to

which I allude has reference principally to the costliness of the apparatus and fittings on which the companies insist as a condition of constant service; and not to the exercise of the powers they possess, but do not as a rule employ, to improve the present system by insisting on the due carrying out of the really useful and valuable regulations quoted above. The adoption of this constant system would enable us to get rid of our cisterns, if not altogether, yet so far as the supply of water for culinary use and drinking is concerned. The neglect of cisterns to which I referred above, would then be a matter of less moment; and as the pipes would be always charged, we should be less liable, than we are now, to the contamination of water, for such an accident as I am about to mention would be almost impossible. Complaint was made that the first portion of water entering certain cisterns in a street and mews at Notting Hill, each time the water was turned on, was of a disgusting character; and this happened at a time when there was an obstruction of the sewer in the mews, the effect being to saturate the ground and flood the surface with sewage and surface drainage. I surmised that the main was defective, and that when the water was turned off the sewage was sucked into the pipe to fill the vacuum, and then forced through the service pipes so soon as the water was turned on. It turned out, so I was informed by the Company, that the defect really existed in a service pipe of one of the houses; the effect, however, was the same, and dangerous nuisances of this kind may occur at any time, or in any locality, under similar circumstances, so long as the intermittent system of water supply is continued. In the present instance several cases of illness were traced to this fouling of the water, and had the sewer contained typhoid excreta, the results might have been lamentable in the extreme, and of the same kind as at Over Darwen, and at Lewes during the recent epidemics of Enteric Fever. As I have remarked in another place, we seem as far off as ever from the constant system, the only gleam of hope in respect of it being that the companies have made, and are making extensive preparations, so as to enable them to supply their districts when called on to do so. They are enabled to give a constant supply even though it should not be required of them by the Metropolitan authority, and they would be gainers by so doing, if the prevention of waste is really of any moment to them, which may be reasonably doubted. The Metropolitan authority is the Metropolitan Board of Works, a body which it is well known are unwilling to execute the authority conferred on them by the Act, strongly disapproving, as they do, of the regulations, the stringency of which they did their utmost, but in vain, to modify.

MORTUARY.

I cannot allow the subject of a mortuary to pass without a brief reference, and an expression of my great regret that the parish is still unprovided with one. As I have stated in former reports, the

burials, at the public expense, of poor persons, occupants in life of single rooms, are reckoned by hundreds every year; and I cannot doubt that in a large proportion of these cases the survivors would avail themselves of the privilege of depositing their dead in a public mortuary of suitable construction, and in a suitable locality. Poor persons in somewhat similar circumstances, but above the pauper class, would, in all probability, also use the mortuary. The law provides for the removal of the bodies of those who have died of an infectious disease, viz., on medical certificate and by Justice's order. Bodies of persons found dead or accidentally killed, and not identified, would be received as a matter of course. A properly-designed mortuary would embrace a room for conducting *post-mortem* examinations, which are now often made under painful and distressing circumstances, to say nothing of the inconvenience to which the operator is put—and there were 154 such examinations last year by coroner's order. It should also embrace a suitable Court for the due and proper execution of the coroner's office.

No progress in this matter has been made since my last report, a conference with a Committee of the Board of Guardians, with a view to the appropriation of a portion of the stone yard at the Dispensary Buildings, Mary Place, Potteries, having proved abortive. I cannot say I regret this result, as I do not consider the site a desirable one. The mortuary should be quite distinct from any association with pauperism, and though privacy of site is desirable, I hold that it should be placed in the most respectable and the most central locality that can be obtained, in order to ensure its being used. I am still of opinion that the

DISINFECTING CHAMBER

should, if possible, be so far associated with the mortuary as to enable one and the same person to have the charge of both establishments. Proceedings in respect of both are alike at a standstill because we have not been able to procure a site. Fortunately during a considerable portion of the year there has not been much need of a chamber, so far as need depends on the prevalence of infectious disease; but I am of opinion that a great amount of good sanitary work might be done with an efficient chamber only in purifying by heat the often foul and otherwise off bedding and clothing of the poor. Latterly, owing to the increased prevalence of scarlet fever, and also during the latter part of 1874, a good deal of disinfection has been satisfactorily carried for your Vestry by Messrs. Wellan & Co., of Manchester Walmer Road, Notting Hill, by chemical agents and heat combined. As to the value of disinfection properly done there can be no doubt—and I am not acquainted with a single instance in which clothing, bedding, &c., that has been properly submitted to the process, has been the medium of conta-

BATHS AND WASH-HOUSES.

No steps were taken during the year to supply the parish with these valuable institutions. I hope, however, that the subject will be taken up again before long, your Vestry having already expressed an opinion favourable to the principle. I have no doubt that in a few years, and at whatever reasonable cost, Baths and Wash-houses will be regarded as indispensable parts of a well-regulated system of sanitary administration.

SEWER VENTILATION.

The subject of sewer ventilation has made little or no progress during the year, and, as usual, numerous complaints have been received of noxious smells emanating from the gullies and ventilators. Each case has been dealt with as far as possible; and in many of the cases charcoal filters have been introduced, with the result of putting a stop to complaints. I am, nevertheless, somewhat sceptical as to the value of this plan, as I cannot divest my own mind of the suspicion that they impede ventilation, and may prove effectual only by preventing the escape of foul air. The subject was brought very prominently before your Vestry during the current year, in consequence of numerous complaints by inhabitants of Elsham-road of bad smells, not only in the roadway, but also in the houses. I made an exhaustive report on the locality, and advised measures for diminishing pressure in the sewers, by opening up blind ends, and so allowing the gas to circulate, or, at least, to escape innocuously into the open air, rather than into the houses. I described the sanitary defects which existed in the houses, and recommended ventilation of the house drains by independent pipes carried from the highest point of the drain to some distance above the parapets of the houses, and I pointed out that this remedy alone would go far to remove the cause of complaint. To what extent the plans have been carried out I have not yet ascertained, but it is certain that a long period had since elapsed without any communication on the subject having been received in my department.

With respect to the question of circulation of air in sewers, *plus* ventilation, I may mention that a striking illustration of the value of this plan was afforded in the locality of Notting Hill Square. At one of the houses at the southern, or loftiest side of the square, there had been numerous cases of fever, and there was clear evidence of the escape of sewer gas into the house in question. Upon careful enquiry into the drainage of the locality, I ascertained that the sewer which received the house drainage originated in a dead or blind end, and that the ventilation was insufficient. Your Vestry directed a communication to be made between the blind end in question and another very near to it, thus setting up a free circulation in the system; and at the same time freely ventilated the sewer near the junction. The effect was everything that could be desired: for certain improvements in respect of the trapping and ventilation of the house drains having been carried out, the evil

complained of was effectually removed, and no further illness has been reported.

It is much to be wished that some effectual plan may be soon discovered for ventilating sewers; and, although I do not profess myself competent to decide what direction such a discovery is likely to take, the most promising idea I have yet heard proposes the extraction of foul air by the action of fans placed in suitable localities, the present ventilators being retained in the capacity of inlets for pure air, instead of outlets for foul air; acting, in fact, like the down draught in a mine. We all know, by reading, what great lengths of galleries in mines deep below the surface of the earth are ventilated, and very efficiently, in this manner, and it seems not unreasonable to hope that the system may be found applicable to the purpose under consideration. Certainly, there seems no reason to doubt the almost illimitable power of steam fans to induce currents in any direction; and leaving the question to be worked out by those who are making a practical study of it, I can but wish them every success, believing an effectual system of sewer ventilation to be one of the chief sanitary *desiderata* of the present day.

WATER SUPPLY.

The Report, by Professor Frankland, on the analysis of the waters supplied by the Metropolitan Water Companies during the several months of the year, is, on the whole, somewhat more favourable than usual. As regards "temperature," he notices the wide variation in the waters derived from riverian sources, as compared with the narrow range in the deep well water of the Kent Company, derived from the chalk. The temperature of the Thames water varied from 36° Fahr. in February to 68°·9 in June, a range of 34°; while the range in the water of the Kent Company was only 7°·9 Fahr., viz., from 51°·1 in May to 59° in September and October. The total solid impurities—composed of a great variety of substances, some of which are organic and very objectionable and at times eminently noxious, while others are either entirely comparatively harmless—was rather less than in previous years; the progressive increase in the quantity which had been noticed during the years 1871-2-3 having apparently ceased. The maximum was observed in January, and the minimum in July. The character of the Thames water, in respect of organic impurities—as represented by its two most important constituents and nitrogen—was practically the same as in the previous year. The maximum pollution occurred in March, April, and December, when the river was in a very objectionable condition. In London the Chelsea Company supplied this foul water in an unfiltered condition, and contaminated with fecal matter. The subjoined table shows the maximum, minimum, and average quantity of organic matter in the water, the amount of organic element (or

bon and organic nitrogen) in the Kent Company's water being taken as unity, or the standard of comparison:—

Name of Company.	Maximum.	Minimum.	Average.
Kent -	1.0	1.0	1.0
West Middlesex	4.3	2.0	3.0
Grand Junction	4.9	2.4	3.3
Chelsea -	7.1	2.3	3.7

Professor Frankland remarks that the water of the Thames is at its source as free from pollution as the chalk well water, but on its downward course becomes largely and progressively contaminated by sewage and the washings of cultivated land, especially during winter.

The average hardness of the Thames water—or the weight of carbonate of lime, or its equivalent of other soap-destroying substances, found in 100,000 parts of water was 21° or parts in 1873, and 19°·7 in 1874. Large quantities of soap or soda are required to soften the water before it is used for washing; but this process could be accomplished for a small portion of the expense by substituting lime for soap or soda, as practised on similar waters at Aylesbury, Canterbury, Caterham, and Tring. The following table exhibits the degree of efficiency of filtration of the waters:—

Name of Company.	No. of occasions when clear and transparent.	No. of occasions when slightly turbid.	No. of occasions when turbid.	No. of occasions when very turbid.
Chelsea -	6	5	0	2
West Middlesex	12	1	0	0
Grand Junction	7	5	1	0

The exceptional occasion on which the water supplied by the West Middlesex Company was slightly turbid was in December, when the condition of the Thames was bad for a lengthened time, so that even the large storage of the Company proved insufficient to render them independent of flood water; it being impossible, moreover, to separate by filtration the whole of the finely divided clay to which the turbidity of the water was due. The Kent Company's deep well water, having already undergone natural filtration through an enormous thickness of chalk, is always clear and transparent, without artificial filtration. The appliances of the Companies supplying river water are, excepting in the case of the West Middlesex Company, unequal to the filtration work required of them. The microscope is called into use in the examination of potable water, and it always reveals numbers of living and moving organisms in the sediment deposited by turbid water on standing. The annexed table exhibits the results of such microscopic examinations during the past six years:—

Name of Company.	Number of occasions when living organisms were found.					
	1869.	1870.	1871.	1872.	1873.	1874.
Chelsea -	3	2	2	3	2	5
West Middlesex	0	0	0	0	0	0
Grand Junction	4	1	1	2	3	5

To Professor Frankland's valuable report, the main features of which I have thus summarised, are appended numerous tables setting forth, in detail, the various information condensed in the text. I subjoin, as of greatest general interest, Table M, which exhibits the

AVERAGES FOR 1874.

(The numbers in this Table relate to 100,000 parts of each Water.)

NAMES OF COMPANIES.	Temperature in Centigrade Degrees.	Total Solid Impurity.	Organic Carbon.	Organic Nitrogen.	Ammonia.	Nitrogen, as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contamination. (Estimated.)	Chlorine.	Total Hardness.	Proportionate Amount of organic Elements, that in the Kent Company's
THAMES.											
Chelsea ...	11·8	26·46	·211	·039	·001	·155	·196	1250	1·87	19·3	3·7
West Middlesex ...	12·5	26·62	·176	·028	·001	·124	·153	930	1·83	19·4	3·0
Southwark ...	12·7	26·08	·192	·030	·001	·125	·155	940	1·83	20·0	3·3
Grand Junction ...	11·4	27·00	·186	·033	·001	·119	·164	990	1·83	20·0	3·3
Lambeth ...	12·0	27·88	·196	·037	·001	·144	·191	1120	1·87	20·0	3·4
OTHER SOURCES.											
New River ...	12·2	26·02	·087	·015	·001	·146	·162	1150	1·67	20·1	1·5
East London ...	11·8	27·13	·153	·027	·001	·076	·104	560	2·04	19·3	2·7
Kent ...	12·4	40·36	·057	·012	·000	·371	·383	3 40	2·48	28·1	1·0

But it is not to Professor Frankland alone that we are now indebted for information respecting the water we drink, many very interesting facts being supplied by Major Bolton, R.E., the water examiner appointed by the Board of Trade, under the provisions of the Metropolis Water Act, 1871. Major Bolton's reports, which, by his courtesy, I receive every month, afford information on all points relative to the machinery for water supply, and to the provision already made, or in progress, for giving a constant supply, the main object of the Act; and which, I suppose, we may, at some remote future, hope to obtain. As the information in question is not generally accessible, I make no apology for presenting a *resumé* of it on this occasion. And, first, with respect to the constant service, we learn that the West Middlesex Company are giving constant supply to a number of houses, on the application of the owners, and are fully prepared to extend the supply when called upon. Extensive works and additional engine power of 12 horse power are in course of construction at Hampton.

The Grand Junction Company have formed a high service reservoir near Kilburn, to contain 6,000,000 gallons, for constant service, and are completing the line of main pipes to connect up this reservoir with the works at Campden-hill; they are likewise erecting boilers and works at Hampton, for which place an additional 70-inch engine of 125 horse power is being constructed, and a extra 30-inch main from Hampton to Kew has been ordered to be laid down. The Chelsea Company does not appear to have taken as yet, any steps in this matter, having, as we shall see, other an

more pressing work in hand. The Act of 1871 provides power to compel the companies to give a constant supply as and when the "public authority" may see fit to move. The authority (Metropolitan Board of Works) has not seen fit to move in respect of the companies supplying this parish, nor is it probable that any steps will be taken until the stringency of the water regulations, to which I have already referred, has been modified.

The number of miles of streets in the Metropolis which contain mains constantly charged, and upon which hydrants could at once be fixed, is 666—including 67 in the West Middlesex, $41\frac{1}{2}$ in the Grand Junction, and 50 in the Chelsea Company's district. The companies are prepared to affix hydrants thereon when required by the authorities; but, in fact—although hydrants might be used for street watering—of 2,531 hydrants already erected, 1,996 are for private purposes, and only 535 for public purposes, including 267 for street watering, in the entire Metropolis.

The companies supplying this parish obtain water exclusively from the Thames, viz., the West Middlesex and Grand Junction Companies at Hampton, and the Chelsea Company at Ditton. The bad state of the water supplied by the last-named company in December appears to have been caused by the intake being "below the filthy outflow of the rivers Mole and Rye." The total volume which may be supplied daily by each company is 20,000,000 gallons. The average daily supply during the month of December was—West Middlesex, 8,600,000; Grand Junction, 10,200,000; and Chelsea, 7,200,000 gallons—eleven to fourteen per cent. of the water (exclusive of waste, an enormous but unknown quantity!) being delivered for other than domestic purposes. The number of houses supplied in the several districts is—West Middlesex, 46,404; Grand Junction, 35,144; and Chelsea, 28,395. Only 401 houses in the West Middlesex district have a constant supply. The estimated population supplied is—West Middlesex, 348,000; Grand Junction, 316,000; Chelsea, 210,000. The West Middlesex Company possess eleven engines of 1,341 horse power; the Grand Junction, eleven of 1,820 horse power; and Chelsea, eight of 1,025 horse power. The number of miles of mains possessed by these companies in the Metropolis is—West Middlesex, 248; Grand Junction, 200; Chelsea, 170. The West Middlesex Company have three subsiding and storage reservoirs for unfiltered water—area, $20\frac{1}{2}$ acres; available capacity, 57,000,000 gallons: and three covered reservoirs for storing filtered water, of an aggregate capacity of 10,922,000 gallons. This company, by means of its large reservoir capacity, avoids taking in water during floods. The Grand Junction Company have four subsiding and storage reservoirs for unfiltered water—area, 7 acres; available capacity, 19,500,000 gallons: the number of covered reservoirs for filtered water being three, their capacity 18,000,000 gallons. This company requires additional impounding and subsiding reservoirs. The Chelsea Company have no reservoirs for unfiltered water, and only two (capacity, 11,000,000 gallons) for storing filtered water. The

filter beds of the several companies are as follows:—West Middlesex, five in number, area 8 acres, depth 5 feet, viz., Harwich sand 1ft. 9in., Barnes sand 1ft., and gravel (screened to different sizes and arranged in layers) 2ft. 3in. The average rate of filtration per square foot of area was, during December, $1\frac{1}{2}$ gallons per hour. (It may be here observed that the quality of the water is improved by a slow rate of filtration—the rate should not exceed $2\frac{1}{2}$ gallons per square foot of filter bed per hour: this will give 540 gallons per square yard each 24 hours, and at this rate filtration should be effectual.) Grand Junction: Number of filter beds, 4; area in acres, $7\frac{1}{2}$; depth, 5ft. 6in.—viz., Harwich sand, 2ft. 6in.: Hoggin, 6in.: fine gravel, 9in.: coarse gravel, 9in.: boulders, 1ft.: average rate of filtration, $1\frac{1}{2}$ gallons per square foot of area per hour. Chelsea: Filter beds, 7; area, $6\frac{3}{4}$ acres; depth, 8ft.—viz., Thames sand, 3ft. 3in.: shells, &c., 3in.: gravel, 4ft. 6in.; rate of filtration, $2\frac{1}{2}$ gallons per square foot per hour. It will be observed that notwithstanding the greater depth of the filter beds of the Chelsea Company, the water supplied by the Company in all times of difficulty arising from a flooded state of the river is unfit for drinking, although the rate of filtration is slower than that deemed sufficient by the water examiner. This is due to the total absence of impounding and storage reservoirs for unfiltered water, to the exceptionally bad quality of the water taken in by the Company, owing to the improper situation of the intake at Ditton, and to the impossibility of filter beds removing suspended matter when in any large quantity; that, moreover, being a principal object of the subsiding reservoirs. The disgusting condition in which the water of the Company was sent out during parts of the months of November and December formed the subject of many complaints both in the public press and in communications addressed to myself, and was referred to in my reports, dated December 16th 1874, and January 13th, 1875. I had, on former occasions, reported specially on the subject, and particularly in February, 1874. The dissatisfaction, which the condition of the water at the late date gave rise to induced the Company to take steps to improve their means of supply by enlarging their storage. The scheme submitted to Parliament in the Session of 1873 included the banking of the Thames at Hampton Court, and was defeated by strong public opposition, on what I described at the time as tactical grounds. No further attempt appears to have been made by the Company to put their supply on a proper footing until great outcry referred to arose. On the 18th December, held at a special meeting of the proprietors, a resolution to the following effect was passed:—

“That the directors be authorised to take such steps as judgment may be necessary or expedient to obtain a fresh supply of water with reservoirs and other works connected therewith, and necessary main pipes from the site of such proposed intake works at Seething Wells, with the least possible delay.”

The measures taken by the directors to secure the

area of 50 acres, near Molesey—for the construction of impounding reservoirs, were approved and adopted, and the directors were authorised to apply to Parliament in the now current Session for the necessary powers. This they have done, and there is every probability that their Bill will pass, and that with the completion of the contemplated additions to their works this Company will be able, at no distant time, to supply its customers with water as clear and transparent as any derived from the River Thames.

GAS.

During the first half of the year the parish was supplied with cannel gas of 20 candle lighting power, and at the increased price of six shillings and threepence per thousand cubic feet. Since July common coal gas of 16 candles has been exclusively supplied at a charge of five shillings per thousand. The subjoined table, taken from the quarterly returns of the chief gas examiner, shows the results of the daily testings of the gas supplied by the Gas Light and Coke Company, at the testing station at 123, Ladbroke Grove, Notting Hill :—

Month.	Illuminating power in Sperm Candles.	AMOUNT OF IMPURITY.			Number of Examinations.
		Sulphuretted Hydrogen.	Ammonia per 100 feet Grains.	Sulphur per 100 feet Grains.	
January -	21.28	..	4.11	21.92	25
February -	21.76	..	1.15	18.46	23
March - -	21.47	..	0.86	15.63	26
April - -	22.04	..	0.56	17.37	22
May - -	21.53	..	0.39	17.97	23
June - -	21.28	..	0.48	17.93	20
July - -	17.13	..	0.50	18.76	26
August - -	16.70	..	0.37	17.79	23
September -	16.83	..	0.15	17.17	25
October -	16.53	{Present} {3 times}	0.19	16.44	26
November -	16.67	..	0.19	17.02	24
December -	16.68	{Present} {3 times}	..	19.01	25

The next table shows the maxima, minima, and averages of lighting power stated quarterly :—

Period.	Maximum.	Minimum.	Average.
1st Quarter (Cannel Gas)	22.9	19.6*	21.50
2nd do. do.	23.0	20.3	21.62
3rd do. (Common Gas)	17.6	16.1	16.89
4th do. do.	18.2	15.5†	16.63

* On two occasions (January 22 & 24) the Gas was less than 20 Candles.

† On two occasions (October 20 & December 31) the Gas was less than 16 Candles.

As regards sulphur impurity, the amount was in excess of the permitted quantity (25 grains in 100 cubic feet of gas), on one occasion only during the year, viz., 26·4 grains on 30th July. Sulphuretted hydrogen was found on three occasions—in the months of October and December respectively.

Ammonia was in excess on 19 occasions in the month of January, out of a total of 25 testings: the average for the entire month being 4·11 grains (maximum 7·5.) This excess above the maximum allowance (2·5 grains in 100 feet of gas) was due to unavoidable causes, in connection with alterations being then made in the purifying machinery, which, having since been perfected, the ammonia has sunk to an almost infinitesimal quantity.

In the Appendix I have given the quarterly returns of the chief examiner, showing the results of the *daily* testings—for which I am indebted to the courtesy of Mr. Wakefield, the Clerk to the Metropolitan Board of Works. These returns show in detail the facts above stated, and prove that the gas has been up to the Parliamentary standard, as estimated by the prescribed tests. Nevertheless, complaints have been made by persons living in various parts of the parish, of the deficient lighting power of the gas. It must be assumed, therefore, that in some cases the burners in use have been in fault. There can, indeed, be no doubt that many consumers fail to obtain a proper light, owing to the habitual use of bad burners, or to the neglect to cleanse good ones. Burners that were of sufficient capacity for the cannel gas, with which the parish was supplied during the first half of the year, are inadequate, and are not adapted to burn common gas so as to produce a good light. Some consumers who have reported the sufficiency of the light when proper burners have been employed, have complained of the great increase in the amount of their gas bills, and in a few instances, I understand, the dissatisfaction has been so great as to lead to a discontinuance of the use of gas. It is a remarkable fact, often observed—a fact that makes us almost despair of ever getting “cheap gas”—that the bills seem always to increase when the price is lowered! How this is brought about I do not pretend to explain; but, so far as my experience goes, it would seem that gas bills never were lower than when the price per thousand feet was at its highest. I do not think that extravagance in consumption—as a result of decrease in price—can be admitted to be a sufficient explanation of the phenomenon. There are mysteries in gas manufacture and supply, which may be revealed hereafter, and the discovery may both enlighten us on the point now mentioned, and also explain the occurrence of complaints of bad light, concurrently with the satisfactory results of the nightly examinations of the gas at the appointed testing station.

During some portion of the year the supply was scarce. The Company, when applied to for an explanation, attributed the scarcity to the refusal of a “sister Vestry” to allow the roads in their parish to be broken up for the purpose of laying down

a larger main from the works at Horseferry Road, to supplement the supply from the Kensal Works, which are inadequate for the large district hitherto dependent on that source. I am not without hope that when the new 24-inch main is completed some of the causes of dissatisfaction to which I have adverted may be removed, and that a sufficient and well-regulated pressure, with a full supply of gas, will be obtained.

The dissatisfaction with the gas led your Vestry to adopt a curious experiment during the current year, viz., that of burning mineral oil with the Silber light in a certain number of street lamps in the Kensington Road. I offer no opinion at present on the comparative value of the two sources of light; but I may mention the fact already well known, and referred to in my monthly reports, that the lighting of the streets in this parish is very unsatisfactory, inasmuch as we are still using burners adapted to consume three feet per hour, as in the days of cannel gas, whereas $4\frac{1}{2}$ feet burners, at the least, should be employed. A suggestion has been made that the average meter system should be adopted in this parish, and it has my cordial approval—already expressed in my monthly reports—as it is only fair and proper that public bodies should pay for the gas they consume and no more. The average meter system has been adopted in the parishes of Paddington and St. Pancras. It has given entire satisfaction, and in a very short space of time the first cost of applying the meters to every twelfth lamp will have been defrayed by the saving in expenditure on gas. In Paddington the Vestry have undertaken all the necessary work of lighting and repairing the lamps. The gas has been burned for a somewhat shorter average period nightly, and a further large saving in expenditure has thus been effected. With reference to the cost of gas in this parish, I may be permitted to mention that during the year the revenue of the Company was many thousand pounds more than necessary to pay the ten per cent. dividend—which, in fact, might have been paid without the increase in the price of the gas, sanctioned by the Commissioners appointed by the Board of Trade, in the month of January. If, however, the price had not been raised during 1874, it is probable that the price charged in 1873 would have been maintained. But, in the face of the enormous over-taxation of gas consumers in 1874, and the reduced cost of coal, the Company could not apply to the Board of Trade for a revision of the price in 1875, the result being that the charge reverted on the 1st of January to the Parliamentary price of three shillings and ninepence per 1,000 cubic feet.

I cannot conclude my report without special acknowledgment of the assistance rendered to me by the sub-district registrars of births, deaths, &c., during the past year, which has been one of crisis. For many years the Registrar-General had pre-

sented to the several Medical Officers of Health of the Metropolis the original manuscript returns of the causes of all deaths registered within their districts during the previous week, these returns being forwarded by the sub-district registrars to Somerset House, and forming the basis of the Registrar-General's "Weekly Return." For this duty the sub-district registrars received no remuneration. The necessity of similar information being supplied to Provincial Medical Officers of Health arose out of the passing of the Public Health Act, 1872, but no such returns being in existence, the information was not forthcoming. Hence many difficulties, into which I need not enter. Suffice it to say that in the Public Health Amendment Act provision was made for the payment of the sub-district registrars by Provincial Sanitary Authorities for information of a precisely similar character to that which had hitherto reached the Metropolitan Medical Officers without expense to the Local Boards. On the passing of the last-named Act, the London registrars, feeling themselves entitled to remuneration for the "secondary use," by the Medical Officers of their manuscript returns, applied to the Registrar-General on the subject, and he, in turn, requested the Society of Medical Officers of Health to bring the question of payment on a proposed scale before the several Vestries and District Boards. The Society, however, declining the somewhat invidious task, the Registrar-General addressed a similar application to the Local Boards. In the result very few of them consented to the requisition of the Registrar-General, who thereupon gave notice to the Medical Officers that after an appointed day in October he should no longer forward the weekly returns; and he was as good as his word. Greatly to their credit, Messrs. Barnes and Hume spontaneously put themselves in communication with me, promising to send me a duplicate copy of the returns as before; and this they did, until, some time afterwards, a fair and mutually satisfactory arrangement was completed between your Vestry and these gentlemen. The upshot is that I obtain the returns early on Monday morning instead of on Wednesday evening, and I am thus enabled to tabulate the vital statistics up to a period within four days of the date of my monthly reports, instead of eleven days, as under the former arrangement. Additional information of value is also supplied by the registrars, and they continue to forward from day to day, on special forms, notice of any deaths that may have been registered from small-pox, scarlet fever, diphtheria, typhus, enteric, and simple continued fevers, and puerperal fever, &c., so that no time is lost in taking the necessary steps after *fatal* cases of these infectious diseases.

I have to express my obligations to the officers of the Board of Guardians for information of cases of infectious diseases, &c.; and I am happy to testify my sense of the cordial support I invariably receive from the Sanitary Inspectors, and of the efficient manner in which their onerous, often delicate, and always important duties

have been performed. Some portion of the time of Messrs. Wood and Langman has been taken up in attending to the new duties imposed on them under the Adulteration of Food, &c., Act—especially in attending the police court to conduct prosecutions. Much of the work of general inspection is still done in a desultory way, owing to the magnitude and inconvenient configuration of the parish, and to the necessity of attending to complaints as they arise from day to day—a necessity that impedes, more or less, the important duty of systematic inspection of the houses in streets, &c., inhabited by the poorer classes of the population. It is desirable that the 35th clause of the Sanitary Act, 1866, should be adopted, in order to the registration and regular inspection of all houses which are let out in tenements. No doubt this would involve much additional work for a time, but the benefits would be commensurate, for the risk of overcrowding would be diminished, ventilation would be improved, and the cleansing of the rooms, staircases, &c., would be systematically carried out. It seems to me that this is the direction sanitary improvement should take in the future; and the staff having been increased by the appointment of an additional officer, I am not without hope of being able to bring the subject under the notice of your Vestry at an early date, with reasonable prospect of success. A principal difficulty in connection with sanitary administration is that of securing an efficient record of work done—a difficulty which has been much lessened in this parish by the conspicuous care and ability with which Mr. Rudman has performed the clerical duties of the department.

I am, Gentlemen,

Your very obedient Servant,

T. ORME DUDFIELD, M.D.,

Medical Officer of Health.

VESTRY HALL, KENSINGTON,

August, 1875.

APPENDIX.

NOTE—The forms for Tables I.—VI. have been settled by the
Society of Medical Officers of Health to ensure
uniformity of Statistical returns.

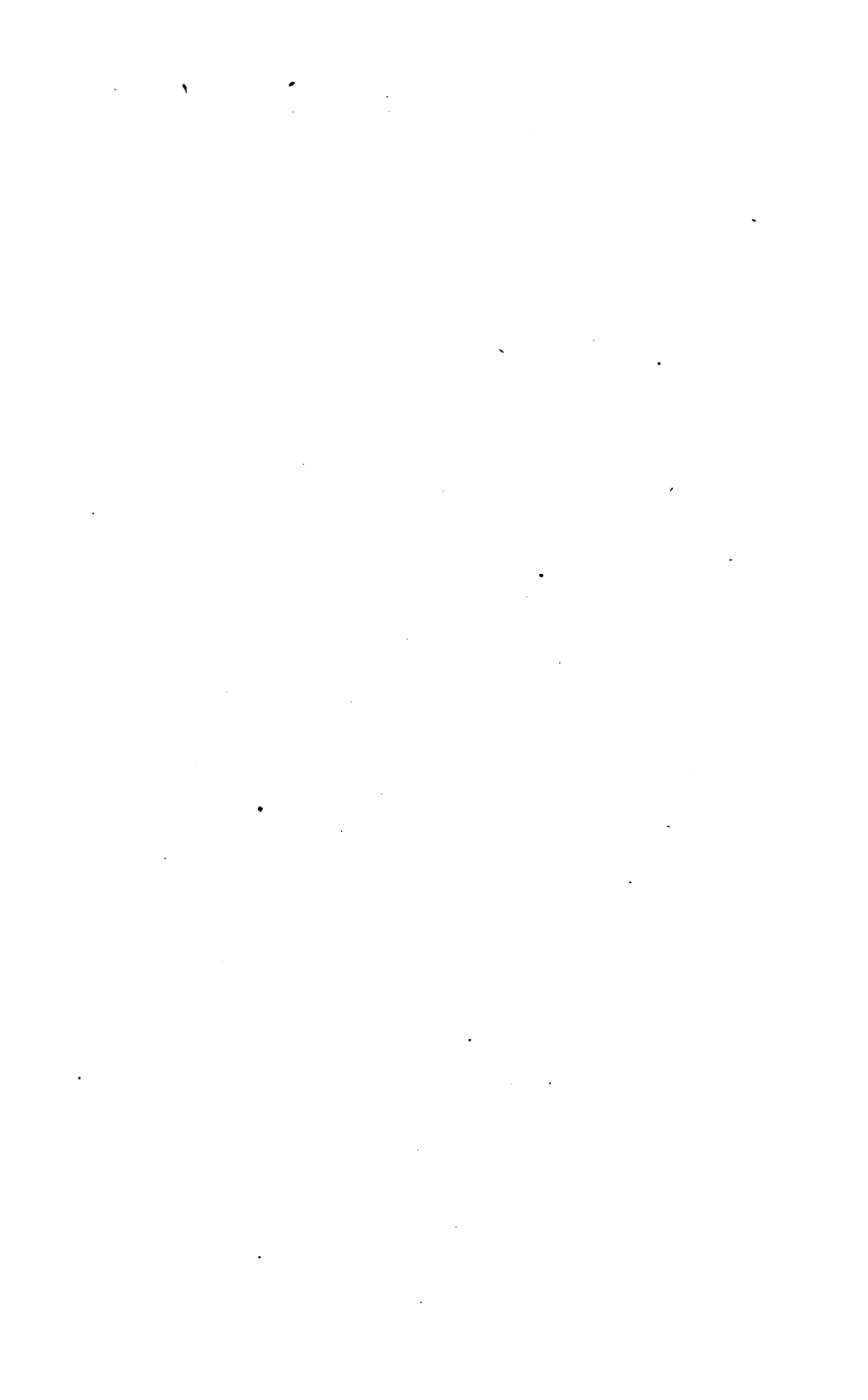


TABLE I.

Estimated population 1874, at the middle of the year, and in 10 previous years ; number of inhabited houses ; Births, Deaths and Marriages (gross numbers).

Year.	Estimated Population*	Number of Houses.	Registered Births.	Deaths.	Marriages.
1874.	138,000.	17,667.	4,356.	2,696.	1,311.
1873	133,000	16,920	4,182	2,486	1,243
1872	127,400	16,206	4,041	2,171	1,182
1871	121,500	15,394	3,804	2,328	1,131
1870	116,350	15,279	3,705	2,473	892†
1869	111,350	14,654	3,625	2,249	891†
1868	106,350	14,029	3,522	2,232	984†
1867	101,350	13,404	3,158	1,933	974†
1866	96,350	12,779	3,080	1,966	984†
1865	91,350	12,154	2,619	1,733	920†
1864	86,350	11,529	2,494	1,849	No Information
Average of 10 years, 1864-1873 }	109,135	14,234	3,423	2,187	„

Notes.—Population at Census, 1871, 120,234.

Area in Statute Acres, 2,190.

Average number of persons in each house at Census, 1871, 7·8.

* The population is estimated to the middle of the year. Between 1863 and 1871 inclusive, a yearly addition has been made to the population based on the total increase between the Censuses of 1861 and 1871. The same principle has been adopted with regard to the number of inhabited houses, in the absence of specific information on the subject, such as has been forthcoming since 1871. Some of the figures in this and subsequent Tables differ from those in former reports, as the result of a revision of the estimated population, based upon the best attainable information. The population at the Census 1861 was 70,108.

† The returns of marriages for the years 1865-70, inclusive, do not include those that took place at the Superintendent Registrars Office, concerning which I have no information.

TABLE II.

Showing Birth and Death Rate: Deaths of Children, and Deaths in Public Institutions 1874, and 10 previous years.

The Year.	Births per 1000 of the Population.	Death rate per 1000 living.	Deaths of Children under 1 year per cent. to Total Deaths.	Deaths of Children under 1 year per cent. to Registered Births.	Deaths of Children under 5 years per cent. to Total Deaths.	Deaths in Public Institutions.*
1874.	31.7	19.5	28.5	17.5	45.4	352
1873	31.4	18.3	27.0	15.9	40.0	272
1872	32.1	17.0	28.9	15.6	44.2	264
1871	31.3	19.1	25.0	15.0	41.6	252
1870	32.1	21.2	24.4	16.4	42.9	330
1869	32.5	20.2	†	†	†	313
1868	33.1	21.0	†	†	†	303
1867	31.2	19.0	†	†	40.6	221
1866	32.0	20.4	†	†	41.6	248
1865	28.7	19.0	†	†	†	250
1864	28.9	21.4	†	†	41.6	281
Average of 10 Years, 1864-1873.	31.3	19.6	†	†	41.8	273

* Viz. The Workhouse and the Hospital for Chest Diseases at Brompton.

† No information.

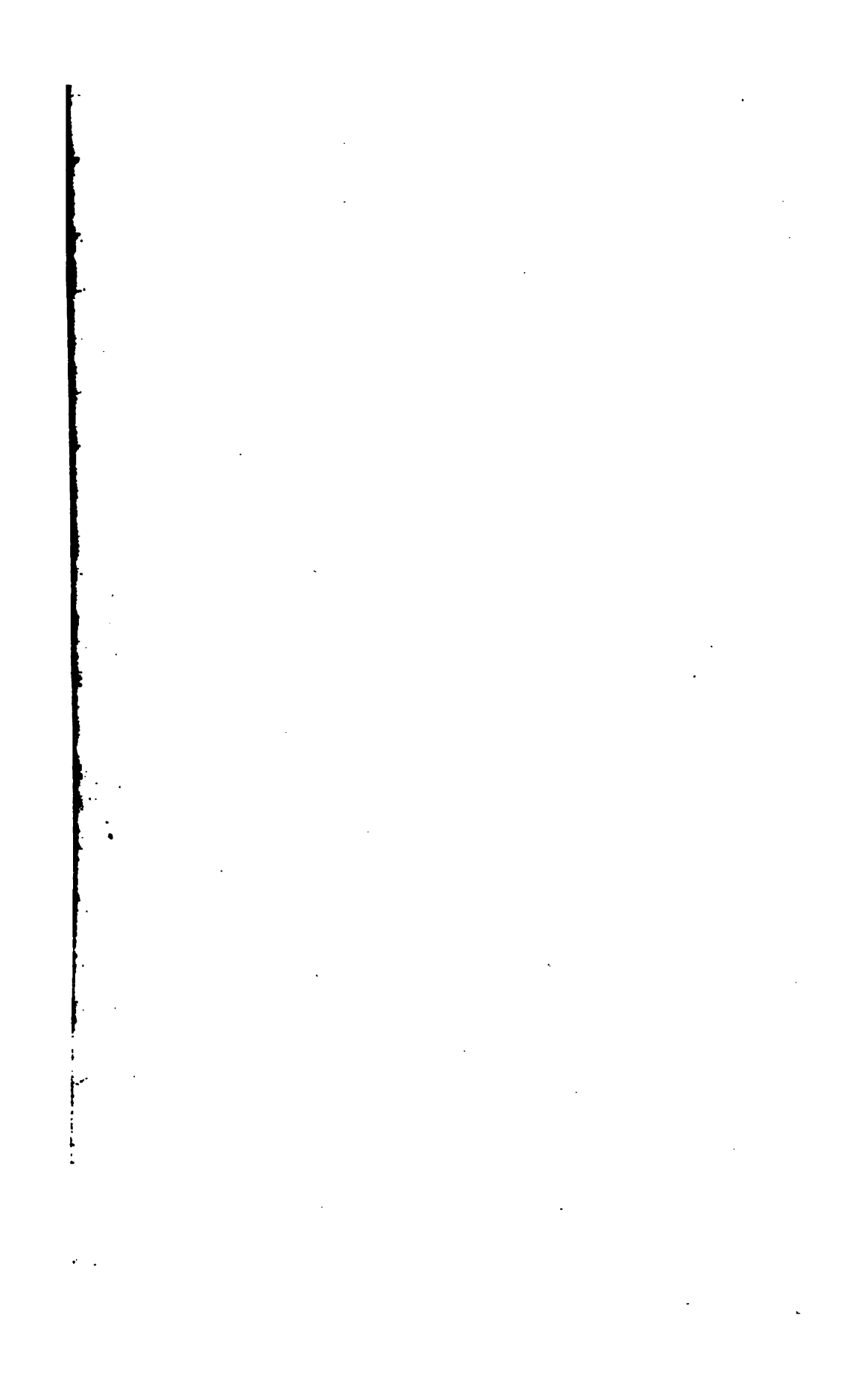


TABLE II.

CH.



TABLE IV.

Showing Mortality from certain classes of Diseases, and proportions to Population, and to 1,000 Deaths, 1874, viz.—

Diseases.	Total Deaths.	Deaths per 1000 of Population.	Proportion of Deaths to 1000 Deaths.
1. Seven Principal Zymotic Diseases... ..	388	2.8	144
2. Pulmonary... .. (<i>other than Phthisis</i>)	554	4.0	208
3. Tubercular... ..	326	2.3	121
4. Wasting Diseases of In- fants (<i>under 5</i>) ...	209	1.5	77
5. Convulsive Diseases of Infants (<i>under 5</i>) ...	161	1.1	59

NOTES.

1. Includes Small Pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Fever and Diarrhœa.
3. Includes Phthisis, Scrofula, Rickets, and Tabes.
4. Includes Marasmus, Atrophy, Debility, want of Breast Milk, and Premature Birth.
5. Includes Hydrocephalus, Infantile Meningitis, Convulsions and Teething.

TABLE V.

Showing the number of Deaths in the 10 years 1864—1873, from the seven principal Zymotic Diseases, and the number in 1874, &c.

Disease.	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	Annual Average 10 years, 1864—1873.	Proportion of Deaths to 1000 Deaths in 10 years, 1864—1873.	1874	Proportion of Deaths to 1000 Deaths in 1874.
Smallpox	5	18	10	29	4	6	8	120	68	1	26.9	12.5	121	45
Measles	100	52	40	19	84	27	70	64	43	38	53.7	25.3	32	11.8
Scarlet Fever	90	31	28	35	170	106	198	95	29	10	79.2	37.1	26	9.6
Diphtheria	Not separately registered.										5.9	2.7		
Whooping Cough.	56	37	28	68	34	71	55	72	77	44	54.2	25.3	45	16.7
Fever	60	77	33	46	52	42	46	48	42	41	48.7	22.8	52	19.3
Diarrhoea	63	104	112	78	113	108	154	129	110	145	111.6	52.3	112	41.6
Total, KENSINGTON	374	319	251	275	457	369	545	539	383	290	380.2	178.0	388	144
TOTAL, LONDON ...	16,029	14,272	14,761	11,660	14,925	17,413	16,476	19,455	12,699	11,355	14,907	198	11,230	147
TOTAL. ENGLAND & WALES } 1862—1871*	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1862—71	1872	1872	1873
	73,220	98,490	96,279	92,030	82,692	72,587	97,352	90,380	100,497	103,801	90,732	188	91,743	188

* The Totals for England and Wales are for 10 years 1862—1871, compared with the year 1873, the latest year of publication at the present time.

TABLE VI.
Inspectors' Report of the Sanitary Work completed in the year ended March 25th, 1875.

Sub-Districts.	No. of Complaints received during the year.	No. of Houses and Premises, &c., inspected.	Results of Inspection.		House Drains.		Privies and W. C.'s.		Dust Bins.		Water Supply.	Miscellaneous.										
			Orders issued for Sanitary Amendments of Houses and Premises.	Houses and Premises, &c., Cleansed, Repaired and Whitewashed.	Houses Disinfected after Infectious Diseases.	Repaired, Cleansed, &c.	Trapped or Ventilated.	Repaired, Cleansed, &c.	Supplied with Water.	New provided.		Repaired, Covered, &c.	Cisterns (new) erected.	Cisterns Cleansed, Repaired and Covered.	No. of Lodging Houses registered under 35th Clause of Sanitary Acts, 1866. *	No. of Dust Complaints received and attended to.	Removal of accumulations of Dung, Stagnant Water, Animal and other Refuse.	Removal of Animals improperly kept.	Bakehouses.	Licensed Cowhouses.	Licensed Slaughteries.	Other Proceedings, e.g. Legal Proceedings.
North.	820	3229	818	567	40	207	76	163	69	4	20	25	5	38	..	2560	64	46	60	18	33	82
South.	662	4057	664	496	28	235	59	178	53	2	11	19	3	37	..	3331	51	12	48	18	22	18
Total.	1482	7286	1477	1063	68	442	135	341	122	6	31	44	8	75	..	5891	115	58	108	36	54	100

* The Act has not been put into operation.

TABLE VIA.

Summary of Monthly Returns of Sanitary Work performed by the Inspectors.

Date of Report.	Houses Inspected.		Mews Inspected.		Slaughter Houses Inspected.		Cowsheds Inspected.		Bakehouses Inspected.		Offensive Trades Inspected.		Sanitary Orders issued.		Letters &c. Received re Dust Removal.		Complaints of non-removal of the Dust.		Orders issued for the removal of Dust.		Date of Report.
	North	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South	
May 6, 1874	348	532	48	72	11	14	13	14	15	8	9	0	65	88	136	258	15	95	302	601	May 6, 1874
June 3 "	360	475	42	61	7	16	19	14	14	23	11	0	61	31	161	222	14	64	294	528	June 3 "
July 1 "	416	520	58	75	18	14	12	10	14	9	10	1	39	86	208	193	26	42	312	335	July 1 "
July 29 "	314	337	48	69	16	8	14	14	13	12	16	0	81	32	187	189	31	36	254	360	July 29 "
Aug. 26 "	219	336	31	74	6	13	3	10	9	19	7	0	37	26	57	88	9	21	87	180	Aug. 26 "
Sept. 23 "	189	216	22	47	11	9	14	8	10	11	4	2	42	35	69	84	12	10	95	106	Sept. 23 "
Oct. 21 "	176	240	32	60	42	32	31	32	9	7	9	0	53	42	109	91	5	6	172	209	Oct. 21 "
Nov. 18 "	235	364	36	62	14	7	12	9	13	16	10	2	48	61	150	121	22	19	210	231	Nov. 18 "
Dec. 16 "	238	285	48	65	9	3	11	8	10	7	13	2	71	80	214	186	46	63	307	377	Dec. 16 "
Jan. 13, 1875	185	202	30	37	10	6	11	9	16	12	3	0	59	32	345	372	69	66	565	635	Jan. 13, 1875
Feb. 10 "	207	198	36	43	12	8	9	9	12	11	13	0	70	72	393	446	51	67	553	839	Feb. 10 "
Mar. 10 "	186	214	24	22	8	7	9	6	12	10	14	0	67	55	293	622	18	96	392	1021	Mar. 10 "
April 7 "	126	138	16	14	8	7	5	9	12	12	8	0	63	42	238	459	39	68	325	887	April 7 "
Totals.	3229	4037	471	701	172	144	163	152	159	157	127	7	756	682	2560	3331	857	653	3808	6309	Totals.

TABLE VII.

Showing the Death rate per 1,000 living; the annual rate of Mortality per 1,000 living from seven Zymotic Diseases; and the proportion of Deaths from these Diseases to the total Deaths in Kensington and in all London in 1874, and in the ten years, 1864—73.

The Year.	Deaths per 1000 living.		Total Deaths from seven Zymotic diseases, Kensington.	Annual rate of Mortality per 1,000 living from seven Zymotic diseases.		Proportion of Deaths to 1,000 Deaths from seven Zymotic diseases.		The Year.
	Kensington.	London.		Kensington.	London.	Kensington.	London.	
1864	21.4	26.5	374	4.3	5.4	204	204	1864
1865	19.0	24.5	319	3.5	4.7	185	196	1865
1866	20.4	26.4	259	2.6	4.8	133	185	1866
1867	19.0	23.0	276	2.7	3.7	142	166	1867
1868	21.0	23.6	457	4.2	4.7	208	200	1868
1869	20.2	24.6	369	3.3	5.5	164	227	1869
1870	21.2	24.1	545	4.6	5.1	222	213	1870
1871	19.1	24.7	542	4.4	6.0	233	242	1871
1872	17.0	21.4	390	3.0	3.8	181	179	1872
1873	18.3	22.5	290	2.1	3.3	119	149	1873
AVERAGE OF TEN YEARS	19.6	24.1	382	3.4	4.7	179	196	AVERAGE OF TEN YEARS
1874	19.5	22.5	388	2.8	3.3	144	147	1874

TABLE VIII.

Comparative Analysis of the Mortality in all London and in Kensington, in 53 weeks, ended
2nd January, 1875.

LOCALITY.	Annual Death Rate per 1000 Living from all causes.	Annual Death Rate per 1000 Living from principal Zymotic Diseases.	Per centage of Deaths under 1 year to Births Registered.	PER CENTAGE OF DEATHS TO TOTAL DEATHS.					
				Under 1 year of age.	At 60 years of age and upwards.	From 7 Zymotic Diseases.	From Violence.	Registered upon infor- mation of the Coroner (Inquests.)	Registered in large Public Institutions.
London	22.5	3.3	15.5	24.6	21.6	14.7	3.6	7.2	17.2
Kensington	19.5	2.8	17.5	28.5	21.7	14.4	1.8	6.4	13.1

Shewing the Principal Localities in which fatal

Name of Street or Place.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	FEVER.			Diarrhoea.
					Typhus.	Enteric.	Simple Contind.	
Absolom Road	1	...	...	...	...	...	...	...
Admiral Place and	2	...	...	...	...	1	...	...
„ Terrace		...	...	...	...	...	...	...
Abingdon Road	...	2	...	...	...	...	...	1
Acklam Road	...	...	...	...	1	1	...	...
Brown's Buildings	2	...	...	...	...	...	...	...
Blenheim Crescent	...	...	...	...	...	...	...	3
Blechynden Street	6	...	...	2	...	...	1	...
Brimley Road	2	...	...	2	...	...	...	1
Bomore Road	2	...	...	...	...	...	...	...
Boundary Villas	...	1	...	...	...	...	...	...
„ Cottages	...	2	...	...	...	...	...	...
Bangor Street	...	1	...	...	...	...	...	1
Cromwell Road (West)	...	...	...	...	...	1	...	...
Cornwall Road	1	...	...	...	...	1	...	1
Child Street and Place	3	...	...	...	...	...	...	...
Coleherne Road	...	...	1	...	...	...	...	...
Clarendon Road	...	...	2	...	...	...	...	...
Crescent Street	...	...	...	...	...	...	1	2
Campden Street	3	1	...	...	...	...	...	1
„ Hill Road	...	...	1	...	...	1	...	...
Calverley Street	...	...	...	1	...	...	...	1
Dartmoor Street	...	1	...	...	...	...	1	...
Devonshire Terrace, Kensington	...	...	...	...	...	1	...	...
Dulford Street	...	2	...	...	...	...	...	...
Edge Terrace	1	...	...	1	...	...	...	1
Earl's Court Road	...	...	...	...	1	...	...	2
Faraday Road	...	...	1	...	...	...	...	...
Fulham Road	...	...	...	...	...	1	...	...
Gordon Cottages	...	...	1	...	...	...	...	...
Golborne Road	1	...	...	...	...	...	...	4
Glo'ster Terrace, Kensington	...	...	...	...	1	...	...	...
Grange (The)	...	...	...	...	1	...	...	...
Holland Street	...	...	1	1	...	...	...	...
Hurstway Street	4	...	...	...	...	...	...	1
Holland Villas Road	...	1	...	...	...	...	...	...
Ifield Road	1	2	...	...	...	...	...	1
James' Street, Kensington	...	...	...	...	1	...	...	...
Kenilworth Terrace	1	1	...	...	...	...	...	...
Kensington High Street	...	...	1	...	...	...	...	...
Kensington Park Road	...	...	1	...	...	...	...	1
„ „ Gardens Mews	...	1	...	...	...	...	...	...
Ladbroke Grove Road	2	...	1	...	...	3	...	...
Lancaster Road	2	1	...	...	...	1	1	2
Lockton Street	1	...	...	...	...	...	...	3
Lonsdale Road	1	2	...	1	...	...	...	...
„ Mews	...	1	...	...	...	...	...	...
Montpelier Street	...	...	...	...	...	1	...	...

There were no fatal cases of Small Pox.

There was a single case of Measles in each of 32 other Streets.

the chief Zymotic Diseases occurred in 1874.

Name of Street or Place.		Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	FEVER.			Diarrhoea.	Total.
						Typhus.	Enteric.	Simple Contind.		
ester Street	...	2	2	...	...	...	...	...	...	4
Road	...	...	...	...	...	1	...	...	2	3
treet	...	2	...	...	1	...	...	...	2	5
Street	...	...	...	...	...	...	1	...	1	2
Square	...	...	...	...	...	...	1	...	...	1
's Gate	...	...	...	...	...	...	1	...	...	1
Mews	...	2	...	...	...	...	...	...	...	2
oke Place	...	2	...	...	1	...	...	...	1	4
a Crescent	...	...	1	...	...	...	...	...	...	1
treet	...	2	...	...	...	1	1	1	...	5
nd Road	...	3	...	...	2	...	...	...	2	7
ello Road	...	7	1	2	...	...	...	...	5	15
x Place	...	...	...	...	...	1	...	...	...	1
ore Place (Lower)	...	...	...	1	...	...	...	...	...	1
Crescent	...	...	4	...	...	...	...	...	...	4
ton Place	...	...	...	1	1	...	...	...	...	2
ngton Road	...	2	...	...	...	...	...	...	...	2
roke Road	...	...	...	...	...	1	...	...	2	3
ster Road	...	...	1	...	...	...	...	...	1	2
Terrace	...	2	...	...	...	...	...	...	...	2
Street, St. Mark's	...	...	...	...	...	...	...	...	2	2
mes Street, Notting Hill	2	...	...	1	...	...	...	...	2	5
therine's Road	...	1	...	...	2	...	...	1	4	8
ement's Road	...	1	...	...	...	1	...	...	2	4
y Gardens Mews	...	...	...	1	...	...	...	...	...	1
m Street	...	11	...	...	...	...	1	1	2	15
igh Street	...	...	...	...	...	...	...	2	...	2
ld Gardens	...	...	...	1	...	...	...	...	...	1
n's Road	...	2	...	...	1	...	...	...	...	3
ke's Mews	...	...	...	1	...	...	...	...	...	1
ur Place	...	...	...	...	...	...	1	...	...	1
Grove	...	...	2	...	1	...	...	...	1	4
s Mews, Place and Street	...	...	...	...	...	...	...	...	...	...
otting Dale	...	4	...	2	...	...	...	...	1	7
ton Street	...	1	1	...	2	...	...	...	1	5
acle Terrace	...	2	1	...	...	...	...	...	...	3
Mews	...	1	...	...	...	...	...	...	2	3
Grove	...	2	...	1	1	1	...	...	1	6
ck Place	...	...	...	...	1	...	...	...	...	1
ngton Road	...	...	...	...	...	...	1	...	...	1
Mews	...	...	...	...	...	...	1	...	...	1
ick Road	...	1	...	...	2	...	...	...	4	7
er Road	...	4	...	...	2	...	...	1	3	10
m Street, Norlands	...	2	...	...	...	...	...	...	2	4
" Notting Hill...	2	...	...	...	...	...	...	...	...	2
house	...	4	...	...	...	...	2	...	3	9

* In addition to the cases of Diarrhoea here referred to five cases of Simple or English and Infantile Cholera were registered, viz., one each in Child Street, Ladbroke Road, Pembroke Square, Portland Road, and St. Philip's Terrace.

TABLE X.
PARISH OF SAINT MARY ABBOTTS, KENSINGTON.

Return respecting the Vaccination of Children whose Births were Registered during the year 1874.

DATE.	Registration Sub-Districts comprised in Vaccination Officer's District.	Number of Births returned in Birth List Sheets.	Number of these Births duly entered in Columns 10, 11, and 13 of the Vaccination Register (Birth List Sheets) viz. :—				Number of these Births which are not entered in the Vaccination Register, on account, as shown by Report Book) of			
			Column 11.		Column 10. Successfully Vaccinated.	Column 13. Dead. Un-vaccinated.	Postponement by Medical Certificate.	Removal to District, the Vaccination Officer of which has been duly apprized.	Removal to places unknown, or which cannot be reached, and cases not having been found.	Cases still under proceedings by summons and otherwise.
			Insusceptible of Vaccination.	Had Small-pox.						
	1	2	3	4	5	6	8	9	10	
1st January } to 30th June. }	Kensington Town ...	1833	12	...	...	209	20	8	64	...
	Brompton ..	400	1	...	...	35	6	4	16	...
1st July } to 31st Dec. }	Kensington Town ...	1798	9	...	...	178	40	12	82	7
	Brompton ...	416	1	...	...	42	8	3	10	2
	TOTALS ...	4357	23	...	...	464	74	27	172	9

TABLE XI.
LICENSED SLAUGHTER HOUSES.

SOUTH SANITARY DISTRICT, (20.)

LOCALITY.	LICENSEE.
Glo'ster Grove East ...	Mrs. Nutkins
11, Church Street, Kensington	Mr. Stimpson
11, Peel Place, Silver Street...	„ Andrews
The Mall, Silver Street ...	„ Wright
57, Fulham Road ...	„ Turner
356, Ditto ...	„ Smith
37, Brompton Road ...	„ Shackell
121, Ditto ...	„ Cox
183, Ditto ...	„ French
12, New Street, Brompton ...	„ Lidstone
7, Montpelier Street, Brompton	„ Hall
60, Kensington High Street ...	„ English
Phillimore Mews ...	„ Clayton
1, Newland Place ...	„ Sandford
15, High Street, Notting Hill	„ Short
133, Ditto ditto ...	„ Candy
6, Hope Terrace, Notting Hill	„ Beall
35, Earl's Court Road ...	„ Matson
Ditto ditto ...	„ Collins
Warwick Road ...	„ Fazan

NORTH SANITARY DISTRICT, (28.)

13, Archer Mews ..	Mr. H. Rush
Ditto ...	„ Ward
20, Bolton Mews ...	Messrs. Smith and Son

TABLE XI—continued.

LICENSED SLAUGHTER HOUSES.

NORTH SANITARY DISTRICT.

LOCALITY.	LICENSEE.
195, Clarendon Road ...	Mr. J. W. Rush
142, Ditto ditto ...	„ Rutland
10, Edenham Mews ...	„ Gibson
Tavistock Mews, Portobello Road	„ Hughes
8, Vernon Mews, Portobello Road	„ Young
196, Portobello Road	„ Scoles
Ledbury Mews	„ French
Lonsdale Mews	„ Olney
50, Prince's Road, Notting Hill	„ Parratt
98, Ditto ditto ...	„ Roser
10, Prince's Mews, Notting Hill	„ Cole
10, Prince's Road Mews, ditto	„ Coles
Portland Road ditto	„ Colley
41, Prince's Place ditto	„ Pickworth
23, Norfolk Terrace ...	„ Matthews
61, Silchester Road ...	„ Matthews
5, James Street, Potteries ...	„ Van
Mary Place, Potteries ...	„ Nind
7, Thomas Street, Potteries ...	„ Squire
27, Ditto ditto ...	„ Squire
Royal Crescent Mews ...	„ Blackburn
Ditto ditto	„ Macpherson
Ditto ditto	„ Down
140, Walmer Road... ..	„ Seaton
144, Ditto	„ Baker

TABLE XII.
LICENSED COW SHEDS.

SOUTH SANITARY DISTRICT. (16.)

LOCALITY.	LICENSEE.
5, Gros'ter Grove East ...	Mrs. Reeves
7, Silver Street	Mr. Mackenzie
7, The Mall, Notting Hill ...	" Edwards
Ditto ditto ...	" Draper
Fulham Road (St. Mark's Place)	" Starr
Holland Park Farm ...	Messrs. Tunks and Tisdall
Newland Terrace	Mr. Harman
Gore Lane ...	" Thompson
Earl's Court Road (Pembroke Place) ...	" Harman
Ditto ditto ...	" Jones
Ditto ditto ...	" Clark
Warwick Road ...	" Pool
South End, Kensington ...	" Woolhouse
Ditto ditto ...	" Lunn
Stratford Road ...	" Clark
Addison Cottage, Lorne Gardens ...	" Lyons
Thistle Grove ...	" Bargar

NORTH SANITARY DISTRICT, (17.)

191, Portobello Road ...	Mr. D. Hughes
207, ditto ...	Aylesbury Dairy Company
Ditto (Angola Mews) ...	Mr. Johnson
Wornington Mews ...	" Jones
Ledbury Mews ..	" Boon
Ditto ...	" Liddiard
Notting Barn Farm ...	" Liddiard
James' Street, Potteries ...	" Arnsby
5, Ditto ditto ...	" Van
21, Thomas Street, Potteries...	" Bidgood
12, Blechynden Mews ...	" White
14, ditto ...	" Copperwheat
15, ditto ...	" Cockman
9, East Road Mews ...	" Stephen Keen
165, Walmer Road ...	" Fredk Keen
10, Talbot Mews ...	" Hornsby
3 & 4, Archer Mews ...	" Skingle

TABLE XIII

QUARTERLY RETURN

OF THE CHIEF GAS EXAMINER.

Cannel Gas.

Results of the Daily Testings of the Gas supplied by the Gas Light and Coke Company to the Testing Station, at 123, Ladbroke Grove, Notting Hill, during the months of January, February, and March, 1874.

JANUARY.	Illuminating Power in Standard Sperm Candles.	Amount of Impurity.			FEBRUARY.	Illuminating Power in Standard Sperm Candles.	Amount of Impurity.			MARCH.	Illuminating Power in Standard Sperm Candles.	Amount of Impurity.		
		Sulphuretted Hydrogen.	Ammonia per 100 feet, grains.	Sulphur per 100 feet, grains.			Sulphuretted Hydrogen.	Ammonia per 100 feet, grains.	Sulphur per 100 feet, grains.			Sulphuretted Hydrogen.	Ammonia per 100 feet, grains.	Sulphur per 100 feet, grains.
1	20.7	None	7.4	23.0	2	20.7	None	1.8	21.0	2	21.4	"	2.4	19.2
2	21.1	"	5.0	23.3	3	20.5	"	1.6	20.8	3	21.0	"	0.2	10.4
3	20.3	"	4.6	...	4	22.1	"	1.8	19.2	4	21.9	"	0.8	13.0
5	20.2	"	7.5	23.7	5	20.9	"	1.2	18.8	5	21.3	"	1.0	14.5
6	22.2	"	6.4	23.1	6	21.1	"	0.6	19.1	6	22.8	"	1.0	15.1
7	22.4	"	4.6	22.1	7	21.7	"	1.2	...	7	21.9	"	1.0	15.1
8	22.4	"	4.2	22.5	9	21.7	"	1.2	...	9	22.1	"	0.8	15.3
9	22.7	"	3.8	21.4	10	21.2	"	1.4	...	10	21.0	"	1.4	15.8
10	21.9	"	3.2	21.8	11	20.7	"	1.2	...	11	21.4	"	0.0	12.9
12	22.7	"	...	22.3	12	21.7	"	0.8	...	12	20.4	"	1.0	14.2
13	22.2	"	4.6	22.6	13	22.1	"	0.6	20.6	13	20.9	"	0.6	15.1
14	22.2	"	5.0	18.4	14	22.0	"	1.0	20.9	14	21.0	"	0.6	16.4
15	22.3	"	5.2	15.1	16	22.8	"	1.3	19.1	16	21.1	"	0.4	17.7
16	22.1	"	5.2	20.3	17	22.9	"	1.6	18.8	17	21.6	"	1.2	17.1
17	20.2	"	3.2	19.7	18	22.5	"	1.2	18.8	18	21.5	"	2.0	17.2
19	20.7	"	2.0	21.0	19	22.5	"	1.2	15.7	19	21.4	"	0.8	17.5
20	21.0	"	4.0	22.4	20	21.1	"	1.0	15.4	20	21.2	"	0.5	17.3
21	Not received.	...	...	...	21	Not received.	...	...	...	21	21.8	"	1.0	17.3
22	19.7	"	4.6	22.8	23	22.6	"	0.6	16.1	23	21.9	"	...	...
23	20.8	"	2.4	23.3	24	21.3	"	2.0	16.4	24	21.2	"	...	...
24	19.6	"	2.2	24.2	25	21.3	"	0.6	16.8	25	21.7	"	...	...
26	22.2	"	2.4	24.0	26	22.6	"	1.0	16.0	26	21.4	"	...	...
27	Not received.	...	...	...	27	22.3	"	1.2	19.2	27	21.0	"	0.8	...
28	20.2	"	4.0	23.6	28	21.1	"	0.0	19.6	28	21.4	"	0.6	15.5
29	20.9	"	3.0	17.3						30	21.1	"	0.8	15.7
30	21.0	"	2.6	24.3						31	22.9	"	0.0	16.
31	20.5	"	1.7	24.0										
Mean	21.28	"	4.11	21.92	Mean	21.76	"	1.15	19.46	Mean	21.47	"	0.86	15.63

TABLE XIV.

QUARTERLY RETURN

OF THE CHIEF GAS EXAMINER

Cannel Gas.

Results of the Daily Testings of the Gas supplied by the Gas Light and Coke Company to the Testing Station at 123, Ladbroke Grove, Notting Hill, during the months of April, May, and June, 1874.

APRIL.	Illuminating Power in Standard Sperm Candles.	Amount of Impurity.			MAY.	Illuminating Power in Standard Sperm Candles.	Amount of Impurity.			JUNE.	Illuminating Power in Standard Sperm Candles.	Amount of Impurity.		
		Sulphuretted Hydrogen.	Ammonia per 100 feet, grains.	Sulphur per 100 feet, grains.			Sulphuretted Hydrogen.	Ammonia per 100 feet, grains.	Sulphur per 100 feet, grains.			Sulphuretted Hydrogen.	Ammonia per 100 feet, grains.	Sulphur per 100 feet, grains.
1	22.1	None	None	17.0	1	21.9	None	0.2	16.6	1	21.3	None	None	17.9
2	23.0	"	"	13.7	2	21.5	"	0.6	18.4	2	21.3	"	0.4	19.1
3	Not received	"	"	...	3	20.9	"	None	18.4	3	21.5	"	None	18.2
4	22.1	"	0.4	14.2	4	21.5	"	"	18.9	4	21.6	"	"	17.8
5	Not received	"	"	...	5	22.0	"	"	17.4	5	22.0	"	"	...
6	21.7	"	2.4	16.8	6	21.4	"	0.8	17.4	6	Not received	"	"	...
7	21.5	"	0.6	17.8	7	21.4	"	None	20.2	7	22.0	"	"	17.8
8	22.5	"	1.2	16.9	8	20.5	"	"	17.9	8	21.9	"	"	...
9	22.2	"	"	17.2	9	Not received	"	"	...	9	21.8	"	"	...
10	22.3	"	None	17.2	10	21.5	"	"	18.9	10	20.8	"	0.8	...
11	22.7	"	0.4	17.3	11	21.6	"	1.0	1.8	11	20.3	"	1.2	17.7
12	21.0	"	0.4	17.3	12	22.0	"	0.8	16.7	12	20.7	"	0.5	17.8
13	21.0	"	1.4	17.1	13	22.2	"	0.2	16.3	13	20.6	"	0.8	17.1
14	22.9	"	0.7	17.4	14	20.7	"	None	17.9	14	20.6	"	1.0	17.3
15	21.6	"	0.4	19.0	15	21.2	"	0.4	16.0	15	20.8	"	0.6	17.3
16	21.2	"	0.2	17.9	16	21.6	"	0.4	17.3	16	21.1	"	0.6	16.9
17	22.2	"	0.0	19.5	17	21.8	"	0.8	17.8	17	21.1	"	0.5	16.1
18	Not received	"	"	...	18	21.4	"	0.6	17.7	18	Not received	"	"	...
19	22.5	"	0.2	9.5	19	Not received	"	"	...	19	21.4	"	0.5	16.2
20	22.5	"	1.4	18.7	20	21.7	"	0.4	18.0	20	21.4	"	1.0	17.4
21	22.2	"	0.6	18.1	21	Not received	"	"	...	21	"	"	"	...
22	23.0	"	0.4	18.2	22	21.7	"	0.6	18.4	22	No return	"	"	...
23	22.2	"	0.0	18.0	23	21.7	"	0.4	20.0	23	"	"	"	...
24	22.0	"	0.0	18.1	24	21.7	"	0.6	19.9	24	"	"	"	...
25	21.2	"	1.0	15.4	25	22.0	"	0.5	19.3	25	"	"	0.8	17.3
26	Not received	"	"	...	26	21.4	"	0.6	18.3	26	"	"	0.4	16.4
27					27					27				
28					28					28				
29					29					29				
30					30					30				
Mean	22.04	"	0.56	17.37	Mean	21.53	"	0.39	17.97	Mean	21.23	"	0.43	17.39

TABLE XV.

QUARTERLY RETURN

OF THE CHIEF GAS EXAMINER.

Common Gas.

Results of the Daily Testings of the Gas supplied by the Gas Light and Coke Company to the Testing Station at 123, Ladbroke Grove, Notting Hill, during the months of July, August, and September, 1874.

JULY.	Illuminating Power in Standard Sperm Candles.	Amount of Impurity.			AUGUST.	Illuminating Power in Standard Sperm Candles.	Amount of Impurity.			SEPTEMBER.	Illuminating Power in Standard Sperm Candles.	Amount of Impurity.		
		Sulphuretted Hydrogen.	Ammonia per 100 feet, grains.	Sulphur per 100 feet, grains.			Sulphuretted Hydrogen.	Ammonia per 100 feet, grains.	Sulphur per 100 feet, grains.			Sulphuretted Hydrogen.	Ammonia per 100 feet, grains.	Sulphur per 100 feet, grains.
1	18.6	None	0.8	16.4	1	16.8	None	0.3	15.7	1	16.8	None	...	...
2	17.6	"	1.2	19.2	3	"	Not received	"	"	2	16.7	"	...	...
3	"	"	0.0	19.1	4	17.0	"	0.8	17.0	3	16.7	"	...	...
4	"	"	1.2	19.6	5	16.6	"	0.6	17.2	4	16.6	"	...	...
6	"	"	0.0	20.4	6	16.6	"	0.6	17.4	5	17.1	"	None	...
7	17.6	"	0.8	20.1	7	17.2	"	0.0	17.1	7	17.3	"	"	16.5
8	17.6	"	0.8	20.2	8	16.9	"	0.6	16.9	8	16.7	"	"	16.6
9	17.4	"	1.0	20.2	10	16.9	"	0.4	18.5	9	16.6	"	"	16.5
10	17.4	"	1.0	20.3	11	16.9	"	0.4	18.1	10	16.2	"	"	21.8
11	17.3	"	0.0	19.3	12	16.5	"	0.0	18.5	11	17.0	"	0.6	18.6
13	17.5	"	1.8	19.6	13	16.8	"	0.4	18.4	12	16.6	"	0.3	15.3
14	17.3	"	1.0	20.3	14	16.9	"	1.0	18.6	14	16.5	"	0.4	18.1
15	17.5	"	0.0	20.5	15	16.7	"	0.4	8.4	15	17.1	"	0.0	16.9
16	16.6	"	0.0	19.5	17	16.5	"	0.6	18.6	16	17.0	"	1.2	16.8
17	16.6	"	1.0	19.4	18	16.1	"	0.3	18.1	17	"	Not received	"	"
18	16.7	"	0.6	19.4	19	16.4	"	0.4	17.6	18	16.7	"	None	17.1
20	16.9	"	0.2	19.4	20	16.3	"	0.5	17.5	19	16.9	"	"	17.1
21	16.8	"	0.0	16.0	21	16.0	Not received	"	"	21	16.7	"	"	17.1
22	17.0	"	0.0	14.4	22	16.5	"	0.5	17.4	22	16.8	"	"	17.4
23	17.2	"	0.0	16.0	24	16.9	"	0.6	19.8	23	16.6	"	"	17.4
24	"	Not received	"	"	25	16.5	"	0.0	19.7	24	16.8	"	"	17.1
25	16.8	"	0.0	16.5	26	16.5	"	0.0	18.4	25	16.9	"	"	17.0
27	16.7	"	0.0	16.0	27	16.9	"	0.0	17.7	26	17.1	"	0.5	17.1
28	16.7	"	0.0	16.3	28	"	Not received	"	"	28	17.5	"	0.0	16.9
29	16.5	"	0.4	16.2	29	16.4	"	0.0	...	29	16.6	"	0.6	14.3
30	16.6	"	0.6	26.4	31	17.3	"	0.0	...	30	17.4	"	0.6	17.9
31	17.1	"	0.6	16.5	"	"	"	"	"	"	"	"	"	"
Mean	17.13	"	0.50	18.76	Mean	16.70	"	0.37	17.93	Mean	16.83	"	0.15	17.17

TABLE XVI.

QUARTERLY RETURN

OF THE CHIEF GAS EXAMINER.

Common Gas.

Results of the Daily Testings of the Gas supplied by the Gas Light and Coke Company to the Testing Station at 123, Ladbroke Grove, Notting Hill, during the months of October, November, and December, 1874.

OCTOBER.	Illuminating Power in Standard Sperm Candles.	Amount of Impurity.			NOVEMBER.	Illuminating Power in Standard Sperm Candles.	Amount of Impurity.			DECEMBER.	Illuminating Power in Standard Sperm Candles.	Amount of Impurity.		
		Sulphuretted Hydrogen.	Ammonia per 100 feet, grains.	Sulphur per 100 feet, grains.			Sulphuretted Hydrogen.	Ammonia per 100 feet, grains.	Sulphur per 100 feet, grains.			Sulphuretted Hydrogen.	Ammonia per 100 feet, grains.	Sulphur per 100 feet, grains.
1	17.3	None	0.8	16.5	2	16.3	None	None	17.6	1	18.2	None	None	15.9
2	16.7	"	0.2	18.1	3	16.9	"	"	17.5	2	17.1	"	"	16.8
3	16.6	"	0.3	16.2	4	16.9	"	"	17.5	3	17.1	"	"	16.8
4	16.4	"	0.2	15.3	5	16.7	"	"	17.3	4	16.4	"	"	16.1
5	16.6	"	0.1	13.2	6	16.8	"	"	16.5	5	17.0	"	"	16.0
6	16.6	"	0.2	14.1	7	16.1	"	"	17.3	6	16.5	"	"	19.4
7	16.4	"	0.0	17.0	8	16.7	"	"	18.1	7	16.5	"	"	18.5
8	16.3	"	1.0	16.1	9	16.8	"	"	14.5	8	17.0	"	"	19.1
9	16.5	"	0.5	15.6	10	16.7	"	0.4	15.5	9	16.7	"	"	18.2
10	16.3	"	0.4	16.1	11	Not received	"	"	"	10	15.8	prant.	"	22.0
11	16.3	"	0.2	16.2	12	Not received	"	"	"	11	17.4	do.	0.4	22.1
12	16.3	"	0.0	17.1	13	16.7	"	0.4	15.0	12	17.2	trace	None	24.0
13	16.1	"	0.0	17.2	14	16.6	"	None	16.0	13	16.6	None	"	22.1
14	16.3	"	0.0	17.3	15	16.6	"	"	14.4	14	16.6	"	"	15.9
15	16.7	"	0.0	17.3	16	16.5	"	1.0	18.3	15	17.0	"	"	16.2
16	16.6	"	0.0	17.3	17	16.5	"	"	16.6	16	16.6	"	"	16.1
17	Not received	"	0.0	17.3	18	17.7	"	0.8	19.1	17	16.5	"	"	16.3
18	16.6	"	0.0	17.5	19	17.3	"	0.6	...	18	16.5	"	"	16.3
19	15.5	"	0.0	17.4	20	16.7	"	None	18.8	19	16.5	"	"	16.6
20	16.2	"	0.6	15.7	21	16.2	"	"	18.8	20	15.9	"	"	22.4
21	16.2	"	0.4	15.7	22	16.1	"	1.0	16.7	21	16.4	"	"	...
22	16.5	"	0.0	16.2	23	16.4	"	None	16.7	22	16.5	"	"	22.2
23	16.4	"	0.0	15.8	24	16.6	"	"	16.5	23	16.5	"	"	...
24	16.4	"	0.0	15.4	25	16.6	"	"	...	24	17.2	"	"	...
25	17.8	traces	0.0	15.3	26	16.6	"	"	...	25	...	"	"	...
26	17.4	much	0.0	18.4	27	16.5	"	0.3	...	26	...	"	"	...
27	16.8	trace	0.0	18.2	28	16.9	"	0.0	16.9	27	16.6	"	"	22.3
28	16.3	None	0.0	18.2	29	16.7	"	0.0	18.4	28	16.7	"	"	...
29	16.4	"	0.0	18.2	30	"	"	"	"	29	16.0	"	"	20.5
30	16.3	"	0.0	17.8	31	"	"	"	"	30	16.8	"	"	20.7
31	16.3	"	0.0	17.8						31	16.8	"	"	
Mean	16.53	prant. three times.	0.19	16.44	Mean	16.67	"	0.19	17.02	Mean	16.68	prant. three times	"	19.01

THE ANNUAL REPORT
ON
THE HEALTH
AND
SANITARY CONDITION, ETC.,
OF THE
Parish of St. Mary Abbotts,
KENSINGTON,
FOR THE YEAR
1875,
AND
SPECIAL REPORT
ON THE
*ALLEGED CHRONIC PREVALENCE OF
TYPHOID FEVER IN SOUTH KENSINGTON.*

BY
T. ORME DUDFIELD, M.D.,
(*Vice-President of the Society of Medical Officers of Health, etc.,*)
MEDICAL OFFICER OF HEALTH.

KENSINGTON :
J. WAKEHAM, PRINTER, 4, BEDFORD TERRACE, CHURCH STREET.

1876.



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TWENTIETH ANNUAL REPORT
OF THE
MEDICAL OFFICER OF HEALTH.
Being for the Year 1875.

To the Vestry of the Parish of St. Mary Abbots, Kensington.

GENTLEMEN,

In pursuance of my usual practice the vital statistics in the present Annual Report will be laid before your Vestry for the 52 weeks composing the registration year 1875, ended on the 1st January, 1876. The advantage of this arrangement is that it affords the means of comparing parochial and metropolitan statistics. The Vestry year terminates on the 25th March 1876, and the ordinary sanitary statistics will be presented to that date. Some subjects of interest will be dealt with to the date of the report. For many purposes, in fact, the report is for the year ending in July, 1876, as it seems to me a useless refinement to defer speaking of matters worthy of notice until they have lost all immediate interest, because they do not happen to have fallen out within the period nominally embraced by the report,

With this brief explanation I pass on to observe that I have again to chronicle a continuation of the altogether remarkable increase of population, which for many years past has distinguished the Parish of Kensington above all others in the Metropolis, a rate of increase which seems likely to persist so long as there is any room for building operations. This, however, at the present rate of growth cannot be for many years, seeing that the increase in the number of new houses brought into occupation has for a considerable period averaged seven hundred annually. The number newly brought into rating last year was 777, and this represents an increase in the population of about 5,500 souls. Some portion of this increase is due to the excess of births over deaths; but, as will be shown later on, the larger part is due to immigration. For reasons stated at length in former reports, the parish has a birth-rate considerably below the average in all England and in the Metropolis; nevertheless, the number of children born last year was 4,478; while the deaths registered from all causes were only 2,786, the excess of 90 over the number in 1875 being entirely accounted for by the increase of population. The estimated population at the middle of the year was 143,500; the gross death-rate therefore was 19.4 per 1000 persons living, but after deducting the deaths of non-parishioners that took place in the Hospital for Consumption and Diseases of the Chest at Brompton, and at St. Joseph's House, Notting Hill, the death-rate is lowered to 18.1 per 1000. Allowance, however, should be made for the deaths of parishioners in Hospitals and other places outside the registration districts; a number probably equal to the deaths of

non-parishioners in public institutions. Assuming then that the correct death-rate was 19.4 per 1000, it will appear that the state of the public health in Kensington, gauged by that standard, admits of favourable comparison, as it should do, with the Metropolis as a whole, and with the several great districts into which it is divided by the Registrar General, as will be seen in the following table:—

Death-rate.		1875.	1874.	1873.	
Kensington	...	19.4	19.5	18.3	per 1000.
All London	...	23.7	22.5	22.5	"
West Districts	...	22.1	20.9	20.5	"
North	"	22.3	21.8	21.2	"
Central	"	26.0	25.6	25.0	"
East	"	25.5	25.4	25.2	"
South	"	24.0	21.5	22.0	"

The rate of mortality last year, as compared with 1874, shows a considerable increase in the Metropolis as a whole, and in the West Districts among others. The death-rate in Kensington, though slightly lower last year than in 1874, was still in excess of 1873. The decennial average death-rate in Kensington is 19.4.

For registration purposes the parish is divided into two sub-districts, called respectively "Kensington Town" and "Brompton." These districts are of very unequal size, the former having an area of 1,497 acres, and the latter only 639—total acreage of the parish 2,190. Probably some 300 to 400 acres are still uncovered by buildings, including Brompton and Kensal Green Cemeteries, and Holland Park. "Kensington" registration district, which is commonly supposed to mean Kensington Parish, comprises, in addition, Paddington, Hammersmith, and Fulham. The subjoined figures show the proportion which Kensington proper bears to the other parts of the Kensington registration district:—

	Area in statute acres.	Inhabited houses, 1871.	Population, 1871.
Kensington	2,190	15,785	120,299
Paddington	1,251	11,847	96,818
Hammersmith	2,287	6,719	42,691
Fulham	1,716	3,469	23,350

For some parochial purposes the parish is divided into wards. The subjoined figures show the acreage of the several wards and other particulars of interest:—

Name of Ward.	Area in statute acres.	Inhabited houses, 1871.	Population, 1871.	Ratable annual value of property, 1871.
Holy Trinity, } Brompton, }	439	3,224	22,128	£246,716
St. John, Notting Hill, and St. James, Norland. }	905	7,780	62,475	£365,012
St. Mary Abbots	846	4,781	35,696	£232,992
	2,190	15,785	120,299	£935,720

As usual the rate of mortality in the Brompton registration sub-district was much below that in the Town sub-district. It becomes increasingly difficult, however, each succeeding year to fix with precision the amount of difference, owing to the want of definite information on the subject of population, it not being possible to say how much of the increase of population in the entire parish belongs to either district. It is certain, however, that building operations have been conducted on a very large scale during the last few years in Brompton, and that its population has increased largely, so that the estimated death-rate is probably less favourable than it should be to this singularly healthy section of the parish. At the census of 1871 the population of the Brompton sub-district was 28,651, and of the Town sub-district 91,583. If the rate of increase had been equal in the two districts the population of Brompton last year would have been 34,190, and of the Town district 109,310. After making the necessary corrections for deaths in public institutions this would give a death-rate of 17.1 per 1000 in Brompton, and 18.9 in the Town. But I think it is fair to assume that the population of Brompton in July last was at least 35,250, and if so its death-rate for the year would be only 16.6; and that of the Town sub district 19.1 per 1000—the deaths of non-parishioners in the Brompton Hospital being omitted in these calculations. The death-rate in the female sex—whole parish—was only 16.9 per 1,000; that of the male sex 23 per 1,000. As stated in former reports the difference in the relative number of the sexes is very great, the preponderance of females being in round numbers 26,700.

Before passing to details, with respect to the special causes of death, it may be well to call attention to some facts with reference to the zymotic diseases—a subject which has always great interest for sanitarians, as their greatest victories have been and will be secured in coping with these. Such another discovery as that of Jenner may scarcely be expected—though I would not limit the possible issue of patient research and accumulated experience—but we may hope by a judicious system of isolation of the sick and disinfection to stamp out infectious maladies.

Thus by way of illustration it may be remarked that we have better opportunities of dealing successfully with small-pox, scarlet fever, and typhus fever than with the milder disease, measles; for not only are parents more careful in the home treatment of the graver diseases—striving for the most part to prevent them from spreading—but there are hospitals for the reception of them, to which measles is denied admission. It is true, probably, that if measles was admitted into the hospitals of the Metropolitan Sick Asylum Board few patients would be sent, as most cases prove mild and harmless; and the severer cases generally destroy life by some intercurrent complication, such as pneumonia, and thus when the case becomes dangerous there would not be any great advantage in removing it; but if the power of removal were given and acted

on in this disease we should not witness such a wide-spread extension of it nor so great a fatality as has lately been noted in this parish,—for every child removed in an early stage would be one additional source of infection safely disposed of. It would be well if steps were taken to impress on parents and guardians the importance of not making light of measles and whooping cough, as there can be no doubt that very many of the fatal complications are the immediate result of want of care—and of premature or avoidable exposure at a time when the pulmonary organs are peculiarly susceptible and prone to inflammatory action. These observations are well borne out by the prevailing epidemic of measles, which in the first six months of the year destroyed 103 children. The deaths in the 13 weeks, ended 24th June, were 76, and of these only 12 were registered as “measles” simply, of the other deaths 52 being ascribed to chest complications, and the remainder to a variety of secondary affections. It is noteworthy, also, that though the deaths were so numerous the disease was not especially prevalent or concentrated in any particular locality. In four houses only out of 67 where death took place in the second quarter of 1876, did a second death occur, and in only three out of a total of 44 streets where deaths happened were there three deaths in one street; there being two deaths in each of five other streets, and one death in each of 34 streets. In Portobello road, which is a long street, and contains about 400 houses, there were six deaths in as many houses. It must be obvious that a large number of children had the disease, probably 1,500 in the three months. It is a matter of notoriety that epidemics of this kind occur periodically. Thus in 1873-4 this disease was prevalent, and 148 children died of it and its complications in seven months. Afterwards in 19 months there were only 37 deaths; and now a fresh crop of susceptible organisms having come into existence the disease is again epidemic, with the results above stated. It is somewhat interesting to note, as showing the probability of the foregoing remarks, on the danger of exposure to children suffering from measles that the mortality has been high between the ages of 1 and 2 and 2 and 5; and less in extreme infancy. Crawling and walking children, in other words those who are able to get outside the door into the street and into draughts, etc., have suffered more than those whose tender age demanded maternal care and compelled stay within the house.

It is worthy of notice that not one fatal case of small-pox was registered during the year. Nor was there a death from this cause in 1874, the last death having occurred in January 1873. In the first half of the current year (1876), however, two deaths have occurred which, with the circumstances attending them, may as well be referred to at once. The first death, after an interval of more than three years, occurred at Notting-hill-Square in February. The deceased was a male, aged 40, and unvaccinated. The illness, which lasted ten days, was not traced to the infection which caused it; probably it was contracted from a

patient suffering from *modified* small-pox, *i.e.*, small-pox occurring in a person who at a previous period of life had been successfully vaccinated—a disease often of singular mildness, and then, not compelling the patient's confinement to the house. In April another death from small pox occurred, and the facts that came out in the enquiry to which it gave occasion are so instructive as to bear repetition in this place. The deceased and her only child, a girl of four years, contracted the disease from her husband, the history of whose illness is briefly as follows:—

On or about Tuesday, the 14th March, he was taken ill in the street, got home with some difficulty, and for a few days afterwards was confined to the house, though still able to take part in carrying on his business. On Friday, the 17th, an eruption made its appearance on his face, which he suspected to be of the nature of small-pox from having seen cases of the disease during the last epidemic. His suspicions, however, were set at rest by an authoritative assurance that the eruption was of a simple and innocent character. He therefore not only continued to attend to his business, but on Tuesday, the 21st March (fifth day of the eruption), he resumed out-door exercise. No precautions were taken to prevent the spread of the disease, for none appeared necessary, and the unprotected wife and child were thus exposed to the full force of the contagion. The wife fell ill, but not until Sunday, the 2nd April, and again the gravity of the case appears to have been overlooked: the eruption of small-pox appeared on Wednesday, the 5th April, and was recognised on the following day. Arrangements were then made for the patient's removal to the London small-pox hospital at Highgate, which, however, was not effected till Sunday, the 9th, and the poor woman died on the 11th. The child fell ill on Thursday, the 6th April, the eruption made its appearance on the 8th, and she recovered, after a very severe and dangerous attack of confluent small-pox. She had been vaccinated only two days before her illness, *viz.*, on the day that the nature of her mother's illness was recognised, but all too late to do her any good, for the vaccination and the small-pox alike ran their accustomed course side by side without the one in any way influencing the other. Vaccination in infancy had been neglected in deference to the mother's prejudices. The mother herself had been imperfectly vaccinated in childhood. The failure in medical diagnosis in the first of these cases is much to be regretted, for the dates prove that if the disease had been recognised even when the eruption appeared on the husband, his immediate isolation would have saved the wife and child, and they might at that time have been protected by vaccination.

Whilst investigating the above cases, another case in the same street came to my knowledge, the circumstances of which are no less remarkable. The patient was a young man, an assistant in a shop. The eruption of small-pox came out on Sunday, the 16th January, but the constitutional disturbance was so slight as not to hinder him, for a day, from following his occupation. On Friday,

the 21st, annoyed at his disfigurement, he sought advice, and was assured of the innocency of the eruption. He therefore continued in his employment till Sunday, the 23rd, when the nature of the disease was recognized, and the man was sent home to bed, and made a speedy recovery. I may mention that this man and the other before mentioned, who when seen still bore the traces of their illness on their faces in the form of "pitting," were quite ignorant how or where they contracted the disease. Their cases afford a good practical illustration of the view expressed above, that the first fatal case alluded to may have been contracted from a person suffering from *modified* small-pox, for it must be obvious that these men were capable of spreading the disease to any extent among susceptible individuals. They both had been efficiently vaccinated in infancy. Could we desire any better evidence of the protective power of vaccination than is afforded by this contrast? Three unvaccinated persons suffer from confluent small-pox, and two of them die; while the two patients who had been vaccinated take the disease so mildly as not to be prevented from attending to their business. At the end of June four other cases of small-pox occurred. The previous cases were all at Notting Hill: these, south of Kensington high road. Two of the patients, domestic servants in place, and the third, a married woman, were removed to the small-pox hospital at Stockwell, through the agency of the relieving officer; the fourth case, a single man, was properly isolated and treated at his own residence. No connecting link between these cases could be traced, though they all occurred within the course of a few days, but at considerable distance apart. There are not wanting signs that small-pox is about to visit this Metropolis again, and it is to be regretted, therefore, that in the absence of a registration of diseases, and of what is still more urgently needed, a legislative enactment for the compulsory disclosure of infectious maladies, we have no certain means of ascertaining the existence of even so dangerous a disease, unless cases occur in dispensary or poor-law practice; and even then we are indebted to the courtesy of the officials for any information we may receive. It was by the merest accident that I heard of the first-mentioned group of cases.

Scarlet fever was not prevalent beyond the average, the deaths having been 83, against an uncorrected average in ten years of 73. After making due allowance for increase of population, the deaths in 1876 at the decennial rate would have been 91. The deaths from diphtheria were nine above the average. This disease appears to be on the increase, unless we assume that in former days some cases were returned as scarlet fever, as was the fact prior to 1869 when diphtheria was first separately registered.

Diphtheria, Scarlet-fever, and Measles were prevalent diseases for a short time at the end of the year in Brompton, but they did not lay any serious hold on the district. There were six deaths from measles and diphtheria respectively, and two from scarlet

fever in the last week of the year. Investigation of the cases led to no particular result—to no discovery of any common origin or connecting link between the cases to account for so unusual a mortality—most of the deaths, moreover, taking place in well-to-do families. The excessive mortality proved to be of an exceptional character, for in the first quarter of 1876, no death from diphtheria was registered, only three from scarlet fever, and a very few from measles. About this time, however, a circumstance came to my knowledge which is worth mentioning as an illustration of one of the many unsuspected ways in which infection may be spread. Two cases of scarlet fever had occurred in a house in the Brompton district. Neither the rooms nor their contents had been disinfected, when the head of the family fell into difficulties, and the broker was put in possession. The day and hour appointed for the sale of the infected property had been fixed when I received the first intimation of the state of affairs, for which I was indebted to a member of your Vestry. I lost no time in acquainting the sheriff's officer and the auctioneer with the provisions of the Sanitary Act, 1866, with reference to the sale and removal of infected things without previous disinfection; and the sale was, not without some difficulty, prevented. It would have been a satisfaction to be able to believe that the process of the law had been carried out by the sheriff's officers in ignorance of the facts of the case, but there was little room for such belief. I am assured that the man in possession was duly informed of the nature of the illness at the beginning of his residence in the house, and that the auctioneer's clerk, who took the inventory for the catalogue, and who had ascertained the contents of the sick room by cautiously peering in at the open door, requested permission to smoke, as a protection against infection. I need not comment on this case; but I think it will be considered a not unreasonable inference from the facts that what would have been done in this instance, but for my interference, may have been done in similar cases already, and may be done again, unless some means are taken to call the attention of the proper authorities to the subject. I am told the law of execution is strict, and that the officers are bound to time in fulfilling their duties. It is clear, however, that the sanitary law is strong enough to override any difficulties that may arise, provided the facts become known to the proper officer; and with reference to the case now under consideration, I venture to add, that had the sale gone on, I should have felt it my duty to inform intending purchasers of the risk they were incurring. Subsequently, I may add, and not long afterwards, a child died in the same house of scarlet fever.

The deaths from "fever," a term which, in the use made of it by the registrar-general, embraces the three distinct diseases—typhus, enteric, and simple continued "fever," were only 29, the corrected decennial average being 60. The deaths from these diseases were 2, 21, and 6 respectively. Both the cases of typhus were in the Town registration sub-district. Nine of the 21

cases of enteric fever occurred in Brompton. A death in Bangor Street, Notting-hill, from this cause, furnished the grounds of an alarming report on a supposed "fever den." On enquiry it turned out that the child had not been in the parish long enough to have contracted the disease; and the almost sudden death—the child having been in apparent good health a few hours before her decease—could not be traced to any definite disease, medical opinion merely asserting a probable in the absence of any demonstrable cause of death. An inquest had been held in consequence of the suddenness of the death, and the jury on viewing the body being annoyed by a bad smell, the coroner directed my attention to the place on the supposition that the smell indicated a sanitary defect which might have been the cause of the child's illness. The house which had recently been cleansed, etc., was on inspection found in general good condition.

The deaths from diarrhoea (107) were 29 below the actual average number in the last ten years.

Whooping cough was the most prevalent and fatal disease of the zymotic class, the deaths, 107, exceeding the average by 41.

There is too much reason for the belief that many of the deaths set down to whooping cough, are due to the want of medical and other attention, the disease being thought too lightly of by the poorer classes which furnish its principal victims, and medical attendance being frequently dispensed with until too late to be of any service. A district medical officer lately told me that he was rarely called to a case of whooping cough until the child was dying, the object of seeking assistance then being, the desire to avoid a fuss about a certificate of the cause of death. The necessary confinement of the little patients to one room is too often neglected, but it must be admitted that the circumstances of the poor oppose practical difficulties in this respect.

With reference to the important question of the treatment of the infectious diseases, especially scarlet fever and "fever," I have again to direct attention to the unwillingness of poor persons to avail themselves of the accommodation provided by the Metropolitan District Sick Asylum Board in the Hospital at Stockwell. One of the consequences of the prejudice underlying this objection, is the transference to private and charitable medical practice of many cases that would otherwise be treated by the District Medical Officers. Very few cases come under the notice of the District Medical Officers, but the Dispensary Surgeons have no cause to complain of want of patients. And here I may mention that having knowledge that many of the cases under treatment recently, in connection with the Kensington Dispensary, were without "proper lodging or accommodation," without which they could not be safely treated at home—some of the sick being, in fact, members of large families in occupation of single rooms, I called the attention of the Committee of the Dispensary to the subject, pointing out that the valuable institution over which they preside might easily become an agency for the spread of infectious

disease, and I am happy to state that the Committee entering fully into my views, gave such instructions to their Medical Officer as will, I trust, remedy the evil complained of. It will probably be remembered that under the 26th section of the Sanitary Act, 1866, power is given to a justice to order the removal to a hospital within the district, of any person suffering from a dangerous, contagious, or infectious disease, and being without proper lodging or accommodation. The section was rendered abortive by an omission to which your Vestry, at my suggestion, called the attention of the Local Government Board two or three years ago. The omission in question has since been rectified, and now a justice's order is made upon the person legally in charge of the sick person, and disobedience of it entails a pecuniary penalty. So far good. But another difficulty arose owing to the fact already alluded to, that few cases of scarlet fever come under the notice of the District Medical Officers, viz., by application for medical relief being made to the Relieving Officer, through whom alone admission can be obtained into the Hospitals provided by the Metropolitan District Sick Asylum Board. A Justice, however, is empowered to make an order for the admission of a patient, on a medical certificate signed by a legally qualified medical man, into any such hospital within the district, at the cost of the nuisance authority which, in this case, is your Vestry. For the purposes of the Act the entire metropolis is constituted a single district, and the nuisance authority is empowered to arrange with the superintending body of any such hospital for the purpose. No such arrangement, however, had been made, and it appearing to me that the time had come when an arrangement should be made to secure the removal of proper cases to the hospital, even though they should not be in receipt of parochial relief; such cases, namely, as are "without proper lodging or accommodation," and the treatment of which in the crowded habitations of the poor, where they could not be isolated, must always be a source of danger to the public health, I applied to the Local Government Board to learn if the Hospitals of the Metropolitan District Sick Asylum Board were available for the reception of cases removed at the cost of the nuisance authority? The answer was in the negative, and your Vestry thereupon proceeded to make an arrangement with the London Fever Hospital, for the admission therein of the class of cases referred to; and although hitherto no cases have been sent to the hospital, that the arrangement has not been fruitless the following illustration may suffice to prove. A child was taken ill at a small house in a somewhat crowded court. The parents and four other children shared a single and very small room with the sick child. The father's occupation brought him a good deal into contact with private families; he was, nevertheless, strongly opposed to the child's removal to the hospital. The child was not a parish patient, but as he was obviously (in the words of the Sanitary Act, 1866) "without proper lodging or accommodation," I felt it my duty to take steps to obtain a magistrate's order for his removal to the London Fever Hospital. The parents, finding that the child

must go to some hospital, determined to accompany him to Stockwell, and they were so well pleased with the hospital, and with the child's treatment therein, as to have spontaneously declared that in the event of their ever having infectious disease in their family again they would seek the assistance afforded by the establishment of the hospital in question. I may be permitted to make two observations on this case—(1st.) That but for the arrangement your Vestry entered into with the authorities of the London Fever Hospital, the child would not have been removed; and (2nd) that but for his prompt removal we might, and most probably would, have had many cases in the house in which he lived, and in the locality, whereas, happily, there has not been a single additional case. The room was disinfected, and the disease was stamped out. In marked contrast to the foregoing case, I may mention another. A child aged four or five years, was taken ill of the same disease, scarlet fever. The parents and three children, of whom the sick boy was the eldest, occupied one very large room. We endeavoured to remove the child to the hospital, but the parents resolutely refused to let him go, and the father took another lodging for himself in order to increase the space available for the sick child. This child recovered, but, unfortunately, after the lapse of several days the second child, aged two years and a-half, took the infection and died, and the infant also fell ill. It is not too much to say that had the first child been promptly removed, and proper measures for disinfection adopted, as in the case first referred to, the second and third children would have escaped, and the parents would have been spared a great trouble, to say nothing of the labour, the anxiety, and the expense entailed by so much sickness.

POPULATION.

The estimated population at the middle of the year was 143,500, an increase of 5,500 during the year, viz., 1,692 the excess of births over deaths, and 3,808 the gain by immigration. The Town sub-district contained about 108,250, and Brompton 35,250. The males were approximatively 58,400, and the females 85,100; excess of females 26,700. The subjoined table shows the number of persons of each sex arranged in groups of ages at the census, 1871.

AGES OF MALES AND FEMALES, 1871.

All Ages.	Under 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 to 95	95 and upwds.
Males, 48977	7065	10198	8948	8317	5963	4339	2464	1270	378	33	2
Females 71322	7147	11527	16585	14203	9090	6241	3768	2000	667	97	7
Total, 120299	14212	21722	25533	22520	15043	10580	6232	3270	1045	130	9

The preponderance of the female sex may be accounted for with more or less probability by the concurrence of a variety of causes, *e. g.*, (1) the large number of female servants always found in a rich neighbourhood; (2) the numerous schools for girls; (3) the residence from choice of an unusually large number of unmarried females; and (4) the superior longevity of women. The density of the population is 76 to an acre, but there are very wide differences in the degree of density in different parts of the parish, the northern parts, for example, being greatly crowded, compared with the central and southern. The number of inhabited houses at the middle of the year was 18,440, and there were about 1,900 empty or in course of construction. The houses newly brought into rating during the year were 777. There are nearly 7.8 persons on an average to each house; the average in the Brompton sub-district, however, being lower—7 at the census, 1871.

The subjoined table shows the growth of the parish in wealth and population during the present century:—

The Year.	Population.	Rateable value of Property.	The Year.
1801	8,556	£75,916	1823
1821	14,428	93,397	1833
1841	26,834	142,772	1843
1851	44,053	257,103	1853
1861	70,108	375,333	1860
1871	120,299	590,711	1865
1876 (July)	149,000	817,326	1870
		1,272 409 (April)	1876

MARRIAGES:

The number of weddings celebrated was 1,346, viz.—

In Churches	-	-	-	-	-	1,131
At Nonconformist places of worship	-	-	-	-	-	56
At Roman Catholic	„	-	-	-	-	69
At the Superintendent-Registrar's office	-	-	-	-	-	90

1,346

The marriage rate (persons married to 1,000 population) was 18.7. The rate in England and Wales in 1873, last year of publication was 17.6. The marriages in Kensington in 1874 were 1,311; in 1873, 1,241; in 1872, 1,122; in 1871, 1,131.

BIRTHS.

The births registered were 4,477 (*viz.*, males 2,275 and females 2,202): 3,636 in the Town sub-district, and 841 in Brompton. The birth rate in the whole parish was 31.2 per 1,000 persons living; 33.6 in the Town sub-district, and 23.8 in Brompton. The rate in the entire metropolis was 35.7. One hundred and three males were born to every 100 females: the male births forming 50.7 and the females 49.3 per cent. of all the births. The birth rate was rather lower than in 1874, when it was 31.6 per 1000. The rate in the Town district, however, was the same in both years. In Brompton the rate was 24.8 in 1874, just 1 per 1,000 above the

estimated rate last year. The low birth rate in the parish generally is due to the disproportion in the relative number of the sexes. The illegitimate births registered were 188 or 4.2 per cent. of all the births. Registration of births was made compulsory by an Act of Parliament, that came into operation on the 1st January, 1875, but it is probable that through ignorance or indifference some few births may still escape registration. The number, however, cannot be large, the risk of omission being naturally greatest in respect of illegitimate births. One hundred and sixty-nine of the illegitimate births were registered in the Town sub-district and 19 in Brompton: the workhouse is included within the former, and in this establishment there took place 115 births, including 4 still-born (males 66, females 49), of which 93 were returned as illegitimate.

The subjoined table shows the quarterly number of births registered in each sub-district:—

	KENSINGTON TOWN Sub-District.			BROMPTON Sub-District.			Grand Total.
	Males.	Females.	Total.	Males.	Females.	Total.	Total.
1st Quarter	487	460	947	103	116	219	1,166
2nd „	466	445	911	93	108	201	1,112
3rd „	467	421	888	118	104	222	1,110
4th „	454	436	890	87	112	199	1,089
Total....	1,874	1,762	3,636	401	440	841	4,477

DEATHS.

Two thousand seven hundred and eighty-six deaths were registered during the year, viz., 2,113 in the Town sub-district, and 673 in Brompton. The deaths in the first-named sub-district include 195 at the workhouse and parish infirmary in Wright's-lane, and 45 that took place at St. Joseph's House, Portobello-road, Notting-hill. The Brompton total includes 143 at the Consumption Hospital. After deducting the deaths of non-parishioners at the last-named institution, and distributing the deaths at the workhouse, the deaths in the Town-district were 2,068, and in Brompton 585. This gives a death-rate for the whole parish of 18.5 per 1,000 persons living, the rate being approximately 19.1 per 1,000 in the Town sub-district, and 16.6 in Brompton. The death rate of the male sex (whole parish) was about 23 per 1,000; of the female sex 16.9. The deaths of males numbered 1,350 in a population of 58,400; the female population, estimated at 85,100, gave a total of 1,436 deaths. The number of males' deaths was the same as last year, the entire increase (90) occurring in the female sex. The deaths under 1 year of age were 686, 76 less than last year, and 24.6 per cent. of total deaths (viz. 2,786—the deaths of non-parishioners being retained as a compensatory allowance for the deaths of parishioners taking place outside the Parish): the rate in all London was 24.4 per cent. These deaths were equal to

15.3 per cent. on the registered births, the equivalent rate in the Metropolis, as a whole, being 17.6 per cent. The deaths of children under 5 years of age were 1,119, 69 less than last year, and equal to 25 per cent. on the registered births (London 28.5 per cent.), and to 40.1 per cent. on the total deaths (London 43.4). Six hundred and forty-two persons died at 60 years of age and upwards, 60 more than last year, and 23 per cent. of all the deaths, the equivalent rate in all London being 20.8.

The deaths of illegitimate children under five years of age were 88, equal to 47.6 per cent. on the registered illegitimate births, the rate in legitimates being only 25. In the Brompton sub-district the illegitimate births and deaths were equal in number (19), the explanation being that some of the children were nurslings, and probably born out of the parish. The fact remains, nevertheless, that the death rate in illegitimate children is very high, and it is easily accounted for, by the general absence of maternal care, not to mention any less demonstrable reasons. The subjoined table shows the quarterly number of deaths registered in each sub-district, the deaths of non-parishioners in the Brompton Hospital (which are dealt with in another section) being excluded :—

	KENSINGTON TOWN Sub-District.			BROMPTON Sub-District.			Grand Total.
	Males.	Females.	Total.	Males.	Females.	Total.	
1st Quarter	282	326	608	100	82	182	790
2nd "	256	285	541	76	80	156	697
3rd "	205	227	432	64	66	130	562
4th "	255	277	532	112	93	205	737
Total....	998	1,115	2,113	352	321	673	2,786

The subjoined table shows the death rate at 13 periods of four weeks, corresponding to my monthly reports, and the average temperature of the air :—

Date of Report.		Death Rate per 1,000 living.	Mean Temperature of the Air.
Five weeks ended	Feb. 6, 1875.	20.7	40.4
Four "	March 6	24.0	34.8
"	April 3	22.3	42.2
"	May 1	24.2	46.5
"	29	17.2	55.5
"	June 26	18.1	58.3
"	July 24	17.1	58.6
"	Aug. 21	15.2	63.1
"	Sept. 18	14.8	65.2
"	Oct. 16	15.2	53.8
"	Nov. 14	19.6	46.1
"	Dec. 11	21.4	36.5
Three "	Jan. 1, 1876.	22.4	42.3
Average - - - - -		19.4	49.4

SPECIAL CAUSES OF DEATH.

ZYMOTIC DISEASES.—The year was not characterised by any remarkable epidemic: the total deaths from the seven principal diseases of this class being only 372, or 9.6 below the average of ten years, although the population had increased by about 29,000. The deaths occurred in registration sub-districts as follows:—

	Town.	Brompton.	Total.	Deaths. per 1,000 deaths
Small Pox - - -	0	0	0	0
Measles - - - -	12	11	23	8.2
Scarlet Fever - -	58	25	83	29.5
Diphtheria - - -	15	8	23	8.2
Whooping Cough -	87	20	107	38.4
Fever - - - - -	18	11	29	10.4
Diarrhœa - - - -	95	12	107	38.4
Total - - - - -	285	87	372	133.1

It will be seen that the deaths in the Town registration sub-district were 285, and in Brompton 87. This is an increase in the latter district of 31 over 1874, and a decrease in the "Town" of 47. Total decrease 16. The deaths were equivalent to an annual rate of 2.5 per 1,000 persons living, and to 133 per 1,000 deaths, the average of ten years being 2.5

The deaths in all London from these diseases were 178 per 1,000 deaths, and in all England, in 1873 (latest year of publication), 181.

There was not one fatal case of small pox during the year. The most fatal zymotic disease was:—

Whooping Cough, the deaths from which (107) were just double, the (uncorrected) average number in ten years; 87 occurred in the Town sub-district, and 20 in Brompton.

Measles caused only 23 deaths—less than half the (uncorrected) average, viz., 12 in the "Town" and 11 in Brompton,—19 in the winter quarters, and 4 in the summer quarters.

Scarlet fever.—The deaths from this disease 83, (58 in the "Town" and 25 in the Brompton sub-district), were 10 above the (uncorrected) average in 10 years.

Diphtheria caused 23 deaths (3 below the number in 1874); 15 took place in the town, and 8 in the Brompton sub-district.

"*Fever*."—The total deaths from the diseases at present classed under this head were 29 (about 18 below the uncorrected average), viz., *Typhus fever* 2 (both in the "Town"); *Enteric fever* 21 (12 in the Town and 9 in Brompton); and *Simple continued fever* 6, 4 in the Town and 2 in Brompton.

Diarrhœa was the cause of death of 107 persons (95 in the Town and 12 in Brompton), the uncorrected average number in ten years being 116. Ninety-eight of the deaths were those of children under 5 years of age (76 under one year), and 5 of persons above the age of 65. The deaths were as usual most nume-

rous in the warm summer and autumn weather, 84 having been registered in the second and third quarters, and only 23 in the other quarters.

Simple Cholera.—Five deaths were registered under this head, 3 in the Town sub-district and 2 in Brompton.

OTHER ZYMOTIC DISEASES.—*Croup* was the cause of 22 deaths, all under 15 years of age, eleven of them between 1 and 5: sixteen in the Town sub-district and 6 in Brompton.

Quinsy caused two deaths, one in each district, and between the ages of 25 and 45.

Erysipelas was the cause of 22 deaths, 17 and 5 in the Town and Brompton sub-districts respectively: eight of the deaths took place under 5 years of age.

Puerperal Fever (Metria) was the registered cause of 13 deaths (of which 11 were in the Town district), viz., between 15 and 25 years of age, 4 deaths: between 25 and 35, 5; and between 35 and 45, 4. Besides these deaths other 11 (8 of which were in the Town district) were registered from *Childbirth* (7 between 25 and 35, and 4 between 35 and 45)), i.e., from ordinary diseases incident to the puerperal condition, or from, accidents, such as hemorrhage, etc., and not from disease of a specific or infectious character. The total deaths registered as occasioned by or occurring in child-bed were equal to .5 per cent. on the registered births.

Rheumatism caused 26 deaths, 18 in the Town and 8 in the Brompton district—only one death occurring under five years of age. The majority of the deaths under this head were immediately due to heart disease occurring in the course of the malady—a much dreaded complication in all severe cases, especially in rheumatic fever.

ENTHETIC DISEASES.—*Syphilis* was returned in 14 cases, two only of which were in Brompton: eleven of the victims were children under five years of age, all but two of them in the first year of life.

DIETIC DISEASES.—No death was registered from any disease in this order excepting *Alcoholism* (euphemistically so called) which caused only five deaths as registered, all from *delirium tremens*. If the whole truth were known, probably it would appear that the immoderate use of alcoholic stimulants is responsible directly or indirectly for as large an amount of sickness and premature death as of vice and crime. Drink fills our hospitals, our prisons, our workhouses, and—our national exchequer!

PARASITIC DISEASES.—Ten deaths were caused by *Thrush*, all in the first year of life: seven in the Town sub-district, and 3 in Brompton.

CONSTITUTIONAL DISEASES.

The deaths from the diseases in this great class, which includes two orders, were 609, viz., 477 in the Town sub-district, and 132 in Brompton.

Order 1. DIATHETIC.—The deaths from the maladies included in this order were 83, viz., *Dropsy*, 6; *Mortification*, 3; and *Cancer*, 74. Fifty-eight of the deaths from the last-named disease occurred in the Town sub-district, and 16 in Brompton. Ten of the deaths occurred at ages between 35 and 45; 17 in the next decade; 19 between 55 and 65, and 25 at ages above 65.

Order 2. TUBERCULAR.—The diseases included in this order are among the most important with which sanitarians have to deal. Generally of an hereditary character they are nevertheless capable of great amelioration, if not of ultimate extirpation like some others, by improved sanitary arrangements. Scrofulous maladies are unknown in Hygeiapolis! Light, dry air, efficient drainage, warm clothing, good food, and sobriety are powerful antidotes to the bane of tubercle, which is fostered by the opposites—by filth and squalor, by cold and nakedness, by vice, by want of the necessaries of life, by over-crowding in ill-constructed houses, and by all conditions inimical to the preservation of a typical condition of health. The cases that occur in the well-to-do classes of society are too often traceable to the direct influence of heredity. Of the several diseases grouped in this order, *Scrofula* is set down as the cause of 23 deaths, (15 under five years of age,) only 3 in the Brompton sub-district. *Tubercular Mesenterica* was the cause in 67 cases, (all but one in the first year of life), 15 in Brompton. *Hydrocephalus* (water on the brain) and *Tubercular Meningitis* killed 76 persons (16 in Brompton), viz., under 1 year, 29; between 1 and 2, 23; between 2 and 5, 18; and between 5 and 15, 6. More than half the deaths in this order, however, were due to *Phthisis* (consumption) 277, viz.,—213 in the Town sub-district, and 64 in Brompton, irrespective, of course, of the deaths of non-parishioners which occurred at the Hospital for Consumption and Diseases of the Chest. The deaths at ages were:—under 15, 16; between 15 and 25, 49; between 25 and 35, 87; between 35 and 45, 52; between 45 and 55, 48; above 55, 25.

LOCAL DISEASES

Caused 1,217 deaths under the several orders following:—

1. NERVOUS SYSTEM, 285 deaths; 227 and 58 in the two sub-districts respectively, viz., *Cephalitis* (inflammation of the brain), 14; *Apoplexy*, 71; *Paralysis*, 51; *Insanity*, 1; *Epilepsy* (fits), 9; *Convulsions*, 81, and “*Brain disease*,” 58. Apoplexy and paralysis are diseases of late life, as convulsions is of infancy. The deaths from apoplexy occurred at ages as follows:—Under 35, 8; between 35 and 45, 9; between 45 and 55, 10; between 55 and 65, 11; between 65 and 75, 17; and above 75, 16. From paralysis there was only 1 death under 35; 4 between 35 and 45; 3 between 45 and 55; 12 between 55 and 65; and 31 at ages over 65. *Convulsions* on the other hand killed 80 children under 5 years of age, of whom 62 were in the first year of life. The mortality from “brain disease” (so described) was pretty equally distributed

through the whole period of human life, the deaths being rather more numerous in the earliest and, especially, in the latest years.

2. ORGANS OF CIRCULATION.—Total deaths, 162, viz., 133 in the Town, and 29 in Brompton.

Pericarditis (inflammation of the heart-bag), 4; *Heart Disease*, 162; *Aneurism* (a disease of the great arteries), 3. The heart diseases occurring in the course of rheumatic fever are included under the head of rheumatism. These are special to no particular period of life: but are most common in youth and early adult life. Twenty-two of the deaths from heart disease occurred under 35 years of age. In the four decades following the deaths were respectively 18, 26, 38, and 34. Above 75 years of age the deaths were 24. Ninety-six of the deaths took place in the two winter quarters, and 66 in the summer quarters.

Order 3. RESPIRATORY ORGANS.—Total deaths from diseases of these important organs, 577 (viz., in the Town district, 480, and in Brompton 97) including *Laryngitis*, 9; *Pleurisy*, 8; *Asthma*, 16; and '*Lung disease*' 43. The principal causes of death were *Bronchitis*, 326, and *Pneumonia* (inflammation of the lungs), 175. Both these diseases are most fatal in the earliest and latest stages of human life, and the number of deaths is always greatest in cold weather—especially when this is associated with winds and fogs. These facts are illustrated by the figures in Table 3 (Appendix) from which we learn that the deaths from *Bronchitis* and *Pneumonia* were 79, and 54 respectively in the first year of life, and 153 and 54 at ages above 55. The deaths from *Bronchitis* at all ages between 1 and 55, were 94, of which 64 occurred between 1 and 5; and from *Pneumonia* 67, of which 38 likewise occurred between 1 and 5. The deaths from all these diseases in the first and fourth (winter) quarters were 403, and in the second and third (summer) quarters, 174.

Order 4. DIGESTIVE ORGANS.—The deaths from the diseases of the organs principally concerned in digestion were 106; viz., 74 in the Town, and 32 in the Brompton sub-district. The number of deaths from the diseases of the several organs may be seen in Table 3 (Appendix). It will suffice here to say that affections of the stomach and intestines killed 52 persons, Liver diseases, 48; Spleen diseases, 3; and *Ascites* (dropsy), 3.

Order 5. URINARY ORGANS.—57 deaths, viz., Inflammation of the kidneys (*Nephritis*), 3; *Kidney Disease*, 15; Inflammation of the Bladder (*cystitis*), 5; *Diabetes*, 7; Stone (*calculus*) 1, and Albuminuria (Bright's disease—*Nephria*), 26.

Order 6. ORGANS OF GENERATION.—12 deaths, viz., *Ovarian Dropsy* 6, and *Uterus disease*, &c., 6.

Order 7. ORGANS OF LOCOMOTION.—Two deaths from "*joint disease*."

Order 8. *Integumentary System*.—9 deaths, viz., *Abscess*, 4; *Ulcer* 3; and "*skin disease*," 2.

CLASS 4.—DEVELOPMENTAL DISEASES.

The deaths in this class were 349, of which only 51 occurred in the Brompton sub-district.

Order 1. DISEASES OF CHILDREN.—*Premature birth*, 42 (33 in the summer quarters, and only nine in the winter quarters), *Malformations*, 8; *Teething*, 26.

Order 2. DISEASES OF ADULTS. *Childbirth* (already alluded to under the head 'puerperal mortality') 11 deaths.

Order 3. DISEASES OF OLD PEOPLE.—The deaths in this order are grouped under the significant heading "*old age*," and were 118 in number. Two deaths from this "cause" were registered under 65; 34 between 65 and 75; 51 between 75 and 85; 26 between 85 and 95; and 5 above 95 years of age.

Order 4. DISEASES OF NUTRITION. — *Atrophy and Debility*, namely. Number of deaths 144, 131 and 13 in the two sub-districts, respectively; 128 occurred under one year; 11 in the second year, and 3 between 2 and 5. A death from this cause was registered between 45 and 55, and one between 55 and 65. Many of the deaths due to atrophy and debility might be more properly ascribed to an antecedent cause; to wit, bad or improper food in the case of weaned children, and the children of poor women who go out to work. Scrofula also is in some cases the proximate cause of the wasting.

Class 5. VIOLENT DEATH.—52 deaths; 36 in the Town, and 16 in the Brompton sub-district, viz. Order 1. ACCIDENT OR NEGLIGENCE.—*Fractures and contusions*, 22; *burns and scalds*, 5; *poison*, 1; *drowning*, 1; *suffocation*, 10; "*otherwise*," 1. Order 3. *Homicide, murder, and manslaughter*, 0. Order 4. SUICIDE, *wounds, gunshot, cut, stab*, 1; *poison*, 1; *drowning*, 2; *hanging*, 3; "*otherwise*," 2. Order 5. *Execution*, 0. *Sudden deaths* (cause unascertained) 3.

Causes not specified or ill-defined, 13.

DEATHS IN PUBLIC INSTITUTIONS.

The deaths registered in the principal public institutions formed 12.1 per cent. of total deaths, the equivalent rate, in all London being 16.9. At present the principal public institutions enumerated are the Hospital for Consumption and Diseases of the Chest at Brompton, the Workhouse and Parish Infirmary, and St. Joseph's House, both in the Town registration sub-district. There are numerous other minor public institutions, *e.g.* Kensington Barracks, the Crippled Boys Home, Orphanages, Homes, Convents, &c. A very important addition to the number will shortly be made, the Marylebone Guardians having acquired a large site at Notting Hill for their new separate Infirmary for the treatment of the sick poor.

THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—The deaths at this institution were 143 (males, 88, and females, 55,) an increase of 12 over the number in 1874. The great majority of the deceased, all, in fact, save 9, were non-parishioners: ninety-six were admitted from London and the suburbs, and 38 from other than metropolitan counties. The registered cause of death was phthisis (consumption) in 132 cases; aneurism and heart disease in 3; pulmonary diseases in, 4; cancer, 2; kidney disease, 1; enteric fever, 1. Eighty-four deaths were registered in the two winter quarters, and 59 in the summer quarters. The deaths under 20 years of age were 26; between 20 and 30, 55; 30 to 40, 40; 40 to 50, 17; and 50 to 60, 5.

THE WORKHOUSE AND THE PARISH INFIRMARY.—The deaths in these institutions, both under the medical charge of Dr. Whitmore, to whose courtesy I am indebted for much interesting information, numbered 197; males 101; and females 96, the quarterly numbers being 60, 56, 41, and 40. Sixteen children died under one year of age, viz., from diarrhoea (2), chicken-pox (1), convulsions (5), atrophy (2), abscess (1), bleeding from the nose (1), malformation (1), premature birth (2), non-expansion of the lungs at birth (1). Eighty-two deaths occurred at 60 years of age and upwards, viz., between 60 and 70, forty deaths; 70 to 80, thirty-seven; 80 to 90, four; above 90, one; the principal causes of death being diseases of the lungs (23), of the head (2), of the brain (18), and cancer (5). Erysipelas and diarrhoea, each caused two deaths; one death was due to injury (fracture of the femur), and in 23 cases the patients died worn out by old age and debility. Rheumatoid arthritis (1), privation (1), dropsy (2), gangrene (1), and incontinence of urine (1), complete the list. The deaths at ages between 1 and 60 were 99 in number, viz., measles (2), typhus fever (1), enteric fever (1), diarrhoea (4), erysipelas (3), cancer (3), phthisis (36), scrofula (4), brain diseases (16), lung diseases (12), heart diseases (5), kidney diseases (5), dropsy (1), uterine hemorrhage (1), ulcer (1), puerperal mania (1), pyæmia,—child-birth—(1), rheumatoid arthritis (1), marasmus (1). Inquests were held in four cases, the verdicts being—male, 4 days, “Found dead in bed: convulsions.” Male, 2½ days, “Sudden death: convulsions.” Male, 55 years, “Sudden death: disease of the lungs.” Male, 54 years, “Epilepsy;” a *post mortem* examination having been made in each case.

ST. JOSEPH'S HOUSE.—This Roman Catholic Home for the aged poor, situate in Portobello Road, Notting Hill, contained at the last census, (1871,) 213 persons. The deaths last year numbered 45 (males, 23, and females, 22) and occurred for the most part at very advanced age (only 2 under 60 years), and principally from affections common to old age, viz., chest diseases, 17; heart diseases, 7; brain diseases, 8; cancer, 3; kidney disease, 2; diarrhoea, 2; liver disease 1; strangulated hernia, 1; and debility of old age, 4.

INQUESTS.

The cause of death was returned by the Coroner in 164 cases, inquests having been held, viz., 129 in the Town, and 35 in the Brompton sub-district. The cause of death was ascertained by *post mortem* examination in 116 cases. The reason for holding an inquiry was the suddenness of the death in 88 instances: in 36 cases the deceased had been found dead, in bed or otherwise. Forty deaths were due to violence. The ages of the deceased were as follows: Under 1 year, 48; between 1 and 5, 22; between 5 and 60, 67; 60 and upwards, 27. The violent deaths were caused by accidents in 31 cases, viz., by falls under various circumstances (12), by crushing (2), by being run over by a railway train (4), by a horse (1), scalds (2), burns (1) suffocation (8). One death from accidental drowning was recorded. The suicides numbered 9, viz., by hanging (4), by drowning (1), by poison (1), by cut-throat (1), by falls from a house and window (2). Some of the accidental deaths happened in unusual ways, *e.g.*, one man was killed by a fall of earth on him while grave-digging; another (a servant man) was found dead in an area, a grating having fallen on him apparently as he was descending the steps in the night: a third was killed by the giving way of an arch, which fell on him: another by falling into a grains-pit at a cowshed and being suffocated: another by a fall from a tree. The fatal scaffold accidents were 2—not a large number having regard to the extensive building operations going on. Seven of the victims by “suffocation” were young children. Of the deaths returned as “sudden” all were due to diseases, viz., of the lungs and respiratory organs generally 22, of the heart 31, of the brain 22, diarrhoea 3, measles 1, embolism 2, abscess 1, scrofula 1, indeterminate 5. The causes of death in the cases returned as “found dead” included brain diseases 6, heart diseases 13, lung diseases 6—in several cases the verdicts being “open.” I entered so fully in my last annual report into the subject of death after neglected illness, which from the absence of a medical certificate of the cause of death, necessitates the coroner’s inquisition, that I do not feel it incumbent on me on this occasion to do more than call attention to the fact that in a very great many of the cases above alluded to, the inquest would have been totally unnecessary had the deceased received proper attention in illness by a medical man being called in. It must be obvious even to those least acquainted with illness, that not a few of the subjects of enquiry in the coroner’s court died of diseases of a more or less prolonged and acute character, and such as any medical man would readily detect. Had there been medical attendance in these cases an inquest would have been unnecessary, and it cannot be too often or too strongly insisted on that in a large percentage of such cases the mere fact of an inquest being necessary is proof of neglect against those in charge of the deceased—neglect which, if justice were always done, would not unfrequently involve a very serious charge in another

court.* It may be added that the deaths registered on the information of the coroner were 5.9 per cent. of total deaths in Kensington, and 6.8 in all London. The deaths by violence were 1.9 per cent. in the parish, and 3.5 per cent. of all deaths in London.

DEATHS "NOT CERTIFIED."

Under this innocent-looking heading the record of deaths from time to time appears in the weekly returns. The meaning of it is that the deceased passed away without medical treatment by any registered practitioner. A duly registered medical man is compelled by law—since January, 1875—to give a certificate of the apparent cause of death of any person whom he may have attended in the last illness. But the production of such certificate is not essentially necessary for the purposes of registration of death, as in many cases it is not forthcoming. And, more, the signing of such a certificate by a person who is not qualified to give it, viz., by an unregistered practitioner, is no offence at law. I was about to observe that such a certificate, signed by an unregistered practitioner, is but waste paper: but, in fact, the evidence it affords of the cause of death is accepted and entered in the register, though the certificate itself is "invalid," and the death is returned as "not certified." At any rate I am not aware that the evidence of the cause of death afforded by unregistered practitioners is ever refused. So far as I know there are only two individuals practising irregularly in this parish to the extent of giving certificates of the cause of death: and they both claim to be doctors of medicine of a foreign university, though whether their degrees were obtained *in absentia* or after a proper curriculum is more than I can say. Thirty-three deaths were "certified" in this irregular manner during the year—at all ages, from a few days to upwards of seventy years. The causes of death returned include such important diseases as scarlet fever, typhoid fever, diarrhoea, inflammation of the lungs, paralysis, atrophy of children, etc. It is, I need hardly observe, undesirable that such a practice should continue, and I am glad to observe that the attention of the General Council of Medical Education has been directed to it, though they do not as yet appear to have found a remedy. I venture to believe that the course I have in former reports suggested would be attended with good results:—viz., that the giving of a death certificate by an unregistered practitioner should be made an offence within the meaning of the (40th) penal clause of the Medical Act, and subject the offender to the consequences of "falsely pretending to be registered." Inquests, moreover, should be held on the bodies of persons who die under the treatment of unregistered practitioners, that the

* One of the "peculiar people" has just been sentenced to three months imprisonment for neglecting, on mis-called "conscientious" grounds, to obtain medical aid for his sick child, who died. (September, 1876.)

real cause of death may be ascertained. Provisions of this sort would cut both ways. The unregistered practitioner would be chary of certifying the cause of death for fear of the penalty, and his patients would soon become acquainted with the fact of his disqualification—a fact of which, seeing from what class the patients are drawn, they may fairly be supposed to be ignorant. The unregistered practitioner cannot recover fees for attendance, etc.: but this difficulty is got over by a system of cash payments, which, I doubt not, the registered practitioner would be very pleased to adopt were it practicable. It should be added that something has been done within the last few months by the profession for its own protection and for the public good. An association has been formed for the prosecution of persons practising medicine irregularly, and convictions have been obtained in many cases. Once or twice the offence charged has been that of falsely pretending to be registered under the Medical Act, but more frequently proceedings have been instituted under the Apothecaries' Act, which affords a more simple and easy method of procedure. The principal objection to the working of the latter Act is, as I understand, that the Apothecaries' Company, which will not institute proceedings, takes the penalties, the burden of proving the case and the attendant expenses falling on the Association. The penalties go to the Medical Council, when the proceedings are framed under the Medical Act, but the Council in successful cases invariably make an allowance to the prosecutor sufficient to cover the expenses of the proceedings. It is to be hoped that by an alteration of the law, and by the appointment of a public prosecutor, these matters will be rectified—the public having an infinitely greater interest in them than the profession. The “not certified” deaths in this parish form about 1.2 per cent. of all the deaths. The proportion is far greater in some other parts of the metropolis (especially south of the Thames), and in all England.

“NO MEDICAL ATTENDANT.”

The deaths of persons who had no medical attendance in their last illness were nine in number, six infants and three aged people. The cause of death as registered was in the case of the children as follows:—One newly born “premature birth and debility;” two children of one day old, ditto; a child five weeks old, “diarrhœa;” another of eleven weeks (illegitimate) “thrush, convulsions;” another one year old, “whooping cough, convulsions.” The assigned cause of death in the aged people was as follows:—a female of 64, and another of 73 years, “heart disease;” a male of 82 years, “natural decay.”

METEOROLOGY.

The mean temperature of the air at Greenwich during the year was 49° 4 Fahr, the average of 36 years being 49° 3. The averages of the four quarters were 40° 1, 53° 9, 60° 7, and 42° 9. The

highest reading by day ($85^{\circ}.4$) occurred in the week ended August 21st, the hottest week in the year (mean temperature, $66^{\circ}.6$): the lowest reading by night ($23^{\circ}.3$) was registered in the weeks ended February 27th, and December 11th. The coldest week was that ended December 4th, (mean temperature $30^{\circ}.9$.) The dryness of the atmosphere (*i.e.* the difference between the dew point temperature and air temperature) was $5^{\circ}.9$ (average of 35 years $5^{\circ}.6$). The rain fall was 27.3 inches—the average in 36 years being 24.1.

VACCINATION

I am again enabled through the courtesy of Mr. Shattock, the indefatigable Vaccination Officer of this parish, to present a complete return of the particulars of Infant Vaccination during the year 1875. (*Vide* Table X. Appendix.) The figures speak for themselves, and prove how well the provisions of the law are carried out, the results not being surpassed, I believe, in any other district in the Metropolis.

SANITARY WORK.

Table 6 (Appendix) is a statement of the sanitary work carried out by the inspectors in the year ended 25th March, 1876. Table 6a shows, in respect of many of the details of sanitary work, the proportion executed in thirteen periods of four weeks, summarised for the purposes of my monthly reports. The number of complaints received and entered in the complaint book was 1557, of which a very large proportion resulted from inspections by the sanitary inspectors.

DUST REMOVAL.

The communications with reference to the removal of dust, etc., which in the previous year reached a total of nearly 6,000, were 4775 last year, *viz.*, 2037 in the north and 2738 in the south district. The actual complaints of non-removal were 223, *viz.*, 118 in the north and 105 in the south, a great falling off from the number in 1874-5 (1010). The orders issued to the contractors requiring the removal of dust, as a result of inspections principally, were 10,116. Altogether it must be confessed that, though there is much still to be desired, the appointment of a special officer to look after the execution of the dusting contracts has been productive of very considerable advantages.

REMOVAL OF MANURE.

The Sanitary Act, 1866, gives the sanitary authority power to frame regulations with respect to the removal of manure, etc. from mews, stables, and other like places. Your Vestry have exercised this power, but it cannot be said that the regulations have produced much effect hitherto, complaints arising from collections of manure being numerous. There are nearly

one hundred and fifty mews in the parish, irrespective of separate stables; any one of which may become the cause of nuisance from neglect to remove refuse. The regulations require such removal three times a week, viz., on alternate days, and the penalty for neglect, after notice has been served or published directing such periodical removal, is twenty shillings per day. Notice has been duly served on the several premises, and your Vestry have directed further publication of the regulations by posting them in the mews; but more stringent measures will be necessary before the evil complained of is overcome, viz., by proceedings to enforce the penalties.

No doubt, as it is alleged, difficulty is sometimes, and at certain seasons, experienced in getting the refuse removed; generally, however, it is allowed to accumulate for the benefit of the occupiers of stables or *their servants*. If the farmers who collect the refuse could obtain it without cost when they want it, probably they would collect it regularly, even at some inconvenience at those periods of the year when it is of less value to them, and when they are busily employed in agricultural operations. It must of course be admitted that those who keep horses have the right to make the most they can of their stable refuse (though I suspect they rarely benefit by it personally), but they should comply with the law. It might be well to enquire whether, as your Vestry have the power under sec. 95 of 25 and 26 Vict., cap. 102, to collect and remove stable manure with the consent of the owners thereof, it might not be advisable to undertake the work, inasmuch as the addition of the refuse to ashes, etc., would increase the manurial value of the latter, and thus enable your Vestry to obtain a better price for the material when the day—not distant, probably—arrives when the services of contractors will be dispensed with.

The faulty construction of dung-pits is a principal cause of annoyance from collections of manure. I have urgently recommended that so far as practicable the sunken dung pits found in so many mews should be filled up and iron racks substituted. There is not a greater nuisance than a reeking, steaming sunken dung pit. They are rarely dry; the contents are seldom entirely cleared away, and they are placed under the windows of the rooms in which the coachman and his family live. Only less offensive than these are the ordinary brick and cement receptacles mostly above ground—also difficult to clear and frequently damp from want of drainage. In striking contrast to these are the iron-rack receptacles in which the refuse being fully exposed to the air and kept dry is almost entirely free from ammoniacal or other unpleasant odour, even when kept for long periods of time, as it does not ferment and rot. If the law does not at present enable local sanitary authorities to prescribe arrangements in matters of this sort, the sooner such powers are conferred the better.

LEGAL PROCEEDINGS.

The cases in which it was found necessary to have recourse to the Police Court to enforce the orders of your Vestry were fifty-eight, but with a few exceptions, not important. Convictions for various offences under the Slaughter-houses Act, viz., for disobedience of the bye-laws, have been obtained in several cases, but the object of legislation (which was to improve the slaughter-houses by stringent bye-laws strictly enforced) has to some extent been defeated by the course adopted by the magistrates, who have reduced a substantial penalty of three pounds to a nominal one of a shilling in every case, excepting one, when 10s. was the amount. I do not presume to question their power to do this, but I may mention that the penalty of five pounds originally proposed by the "local authority," was altered to three pounds on a representation by the Local Government Board of the opinion of the law officers of the Crown, that the penalty, whatever its amount, would not be subject to reduction at the discretion of the magistrates. It would be well to have this point cleared up without delay. In order to deprive the butchers and their employes of any excuse for breach of the bye-laws your Vestry have gone to the expense of printing them and mounting them on boards, placing a copy at the disposal of each licensee for suspension in the slaughter-house.

A butcher, at Kensal-green, was fined in the mitigated penalty of twenty shillings for slaughtering cattle on his unlicensed premises.

NUISANCE FROM BOILING OFFAL FOR THE FOOD OF SWINE.

Complaints of nuisance from this cause being rife, proceedings were directed by your Vestry to be taken against Mr. F. N. Squire, of Tobin Street, who carries on the business on a large scale. The magistrate adjourned the case for eight weeks in order to enable Mr. Squire "to adopt the best practicable means for abating the nuisance." Mr. Squire went to a considerable expense in doing this, and I hope he has succeeded. At any rate I do not think there is much risk of annoyance from his business of boiling offal (in addition to the business of a fat melter) provided great care is taken to conduct the boiling with all necessary precautions to avoid the escape of offensive vapours. But what was quite practicable in Mr. Squire's case may not be so easy for the poor persons who carry on the same business in the locality without any means of preventing nuisance. Complaints are still heard, occasionally, even though the boiling is generally done late in the evening or early in the morning. It is surprising at what a distance the offensive effluvia are perceptible. In certain states of the wind they are quite apparent near St. John's Church, Notting Hill, and have been supposed to be due to gases from sewer ventilators or street gullies. The business being to all intents and

purposes an "offensive" one, and therefore a suitable one to be regulated by bye-laws under the Act intituled the "Slaughter-houses (Metropolis) Act, 1874," your Vestry have requested the Metropolitan Board of Works, as "local authority" under the said Act, to take the necessary steps to have the business declared an "offensive business," as required by the third section; but up to the present time no action has been taken, to my knowledge, by the "Board."

NUISANCES FROM THE KEEPING OF SWINE IN UNFIT PLACES.

Proceedings were taken against two parties for keeping swine in unfit premises, viz., in stables, situated in a private mews, into which the pigs were turned for air, exercise and foraging; but the magistrate Mr. (now Sir J.) Ingham dismissed the summons, and congratulated the defendants on having discovered how to keep pigs without creating a nuisance and without cost, the animals, it being alleged, subsisting on the food which fell under the mangers, and which would otherwise have been wasted. This decision, characteristic of the humour which has since been transferred to Bow Street, is to be regretted, and is likely to create discontent in certain quarters. It will also occasion a good deal of trouble should it be drawn into a precedent; and if it is to be understood that stables may be used as styies, and that the private mews, of which there are not a few in the parish, are a fit exercising ground for swine. Some of these private mews are dirty enough for such use, if filth constitutes fitness, but I rather venture to hope that the magistrate's decision will stimulate your Vestry's efforts to reduce the number of them. In five other cases small fines were inflicted for the offence under consideration, only one being a repeated offence. In the other cases prohibitory orders were made for preventing the keeping of swine on the premises.

KEEPING COWS ON UNLICENSED PREMISES.

Two convictions were obtained for this offence, and fines of one shilling and two shillings respectively, with two shillings costs in each case, were inflicted on the several defendants.

SHALLOW WELLS.

It is somewhat remarkable with what tenacity "old inhabitants" cling to the often dangerous water obtained from wells, in spite of repeated warnings, and the evidence of analysts as to its unfitness for any domestic purpose. It may be broadly stated that London does not contain any safe shallow wells. The work of sewerage and railway cutting has tapped the springs, and the water of such wells is simply derived from percolation of rain or other less agreeable infusions of surface origin. Nevertheless, such water is often cool, pleasant to the taste, bright, and sparkling, and, so far as the unaided senses can judge, a desirable beverage, particularly if the well is near a grave-yard, the explanation being that the water

is then highly charged with saline products of the decomposition of human remains, which give it these physical properties. The public wells in this parish have been closed by your Vestry, and I would urge the owners of private wells to follow so good an example. There is such a well in Edwardes Square, the water of which was lately examined at my request by the public analyst, who pronounced it "very bad," and unfit for any drinking purpose. It contains three times the amount of solid impurities found in Thames water as supplied by the companies, in addition to those dangerous organic impurities derived from sewage and animal decomposition. I have communicated with the Garden Committee of the Square, by which the water is used for garden purposes, with a view to the closure of the well which is under the public roadway, the pump being at the rear of the lodge. So far, however, certain not very effectual steps have been taken to prevent the public from using the water, steps that require a constant and therefore unhoped-for vigilance to be successful.

Formerly there were shallow wells in some of the licensed cow-sheds, a source of great danger to the public health; but with one exception they have been closed. The exceptional case will, I trust, be successfully dealt with this year, the Sanitary Committee having had demonstrative evidence of the impurity of this water, on the occasion of a recent inspection of the premises.

SEWER VENTILATION.

Several complaints have been received with respect to offensive gullies, ventilating shafts, &c., and have been dealt with in the most satisfactory manner that could be devised in each case. The whole question of sewer ventilation is a most difficult one, and has recently been dealt with in an interesting historical report, by the Clerk to the Metropolitan Board of Works, which is in the possession of each member of your Vestry. It is hardly too much to say that the labours of many years have only enabled the engineer of the Board to demonstrate the uselessness of most of the remedies recommended for the purpose. Certainly, no plan generally applicable has been discovered. Copious flushing of offensive sewers to get rid of putrescent matters before gases are evolved, promises better results than any of the ventilation schemes hitherto propounded, and I submit as an additional reason for avoiding dribbling waste from countless cisterns, that a vast amount of water might thus be saved and utilised in cleansing sewers.

Several new sewers have been constructed during the year, the particulars of which will be found in the Surveyor's report. Many new and re-constructed drains also have been laid under notices from my department.

DRAINAGE MAP WANTED.

It not unfrequently happens when questions of drainage are under consideration, that the want of a good map of the parish showing the sewers, is much felt, and I submit that it would be a

wise and judicious expenditure to set about the preparation of such a map without delay, the wonderful growth of the parish having made the ordnance survey obsolete for a large portion of it. Some of the sewers are old and more or less faulty in construction, material, &c., and will have to be re-constructed. The work of re-construction is, in fact, going on now, but at the present rate of progress will take a long time to complete, much of the expense, moreover, being charged on the current rates. As it is desirable that defective or inadequate sewers should be replaced by sound and efficient ones as quickly as possible, and the work being of a permanent character, I submit it would be well to hasten it, and to charge the next generation with a share of the expense. It is impossible without a plan and description of the existing sewers showing which are good and sufficient, or bad, *i.e.* inadequate in size or faulty in construction (levels,) or material, even to guess the probable expense of carrying out this suggestion. I submit it would be desirable—

1. To obtain the thirty sheets of ordnance survey on which wholly or in part the configuration of the parish is delineated, and to insert thereon all streets, mews, &c., which have been formed since the said survey was taken:

2. To show the whole system of sewers (as far as may be laid down from information in possession of the Vestry, or procurable) to present date, with report, indicating—

- (a.) All sewers in good condition, date of construction, size, and length.
- (b.) All sewers (or system of drainage) known to be inadequate to the requirements of the respective localities, with description of same.
- (c.) All sewers which, though possibly of sufficient capacity, may by reason of old age or otherwise, *e.g.* by defective material, construction, or level, be dangerous to the health of the locality.
- (d.) All sewers which have blind ends, and which by pipe connection with other sewers, air shaft, or otherwise, might be ventilated.
- (e.) All sewers difficult of approach from insufficient number of manholes, &c.

Engineering experience would probably enlarge the scheme of such an inquiry; but I venture to say that the advantages in a sanitary point of view of such information as the above, followed up by execution of all necessary works, would be simply incalculable. The parish once surveyed to date, it would be easy from time to time to insert new streets, and sewers, and we should thus have ready access at all times to information which is in almost daily requisition in the sanitary department.

LICENSED SLAUGHTER HOUSES.

The licensed slaughter-houses which at the date of my last report were 48 in number, are now only 32, the license in 16 cases

having been either refused or not applied for at the licensing session held in October, 1875. The Works, Sanitary and General Purposes Committee viewed the several slaughter-houses in the month of September, and reported on them in the following terms:—

“Your Committee have to report that several of the ‘premises’ are very small, and the ‘slaughter-house’ itself cramped for room, especially where a portion of it has been cut off for the purpose of making a pen for the accommodation of the cattle, the pen usually receiving light and air through the slaughter-house. In some of these cases the partition is a mere railing, the living animals being able to see the killing, while the atmosphere of the slaughter-house (in which the carcasses are hung to ‘cool’ and ‘set’) must be vitiated by their excretions, as they are sometimes kept in the pens for three or four days.

“As the bye-laws forbid even a communication between a stable and a slaughter-house, the object being to preserve the latter in as sweet and wholesome a condition as possible, it appears to your Committee that pens should not be allowed to be *within* the slaughter-house, for it is practically an evasion to say that a railed-off slice or corner of the chamber used for killing is not a part of the ‘slaughter-house’ as defined in the bye-laws, and as distinguished from the remainder of the ‘premises.’ The lairage should be separate and distinct from the slaughter-house, communicating with it by a doorway only. Your Vestry have already resolved to oppose the renewal of the license where such separate lairage is not provided, and your Committee, after inspection, entirely agree in the propriety of that decision. Your Vestry have also decided to oppose the renewal of the license where there is no approach to the slaughter-house save over the foot pavement and through a shop or a dwelling-house; and your Committee, having inspected all the premises of this description, believe that this course is a proper one, for not only is the approach in these cases very defective, but the doorways also are so narrow that it is difficult to understand how the beasts are got through them. Your Committee found several of the slaughter-houses still used as cart-sheds, notwithstanding the bye-law which forbids the use of a slaughter-house for any other purpose than that for which it is licensed.

“A large number of the slaughter-houses having been inspected on the afternoon of Friday, your Committee had the advantage of seeing the business in full operation, and were not favourably impressed by the mode in which it is conducted, for not only were there (as a rule) no ‘tubs, boxes, or vessels formed out of proper non-absorbent materials, with tight and close-fitting covers thereto, for the purpose of receiving and conveying away all manure, garbage, offal, filth, and blood,’ as required by the bye-laws (which have been in the possession of the butchers for many weeks), but even where such receptacles were found, they were rarely in use, or only used to receive so much of the blood, etc., as would not run into the drains. To facilitate this disposition of the products of slaughtering, in one case that came under the notice of your Committee, the trap of the drain had been removed, while in another the drain itself was blocked with clotted blood. Your Committee are of opinion that the grating over the gulley should be a fixture, for so long as it is moveable, and while bell traps continue to be used, there is no security that the blood, etc., will be caught and stored for removal. Your Committee desire to call particular attention to this point, which raises the question whether a ‘bell-trap,’ removable at will, can be fairly described as ‘an appropriate trap’ for a slaughter-house, seeing that it offers no obstacle to the improper disposal of blood and excrementitious matters, or even of the entrails of smaller animals, by which, in some cases, they are informed, the drains have been obstructed.

“Your Committee have not felt it their duty on the present occasion to enter at any further length on defects in the ‘conduct of the business,’

because the bye-laws, if duly enforced by the sanitary staff, are sufficiently precise and stringent to ensure a satisfactory result in this respect; their remarks, therefore, on the several slaughter-houses will be mainly confined to the enumeration of structural defects, inasmuch as after the 'needful works and repairs to the premises' have been executed, 'no alteration may be made in respect of the paving, drainage, ventilation, or water supply to or in the premises without the consent of the Metropolitan Board of Works.'

"And here your Committee would beg to observe that although the 'slaughter-house' itself is defined to be but a 'portion of the premises,' that portion, namely, used for killing, there are no bye-laws to 'regulate the structure' of the lairs or pens, which are often the most defective of all, whether regard be had to their position and construction, to the accommodation they afford, to their lighting and ventilation, or even to the condition in which they are kept. It may be that the framers of the bye-laws deemed it unnecessary to make provision for lairage, having directed that cattle should not be kept in the 'premises' for a longer time than 'absolutely necessary' before slaughtering: but, in fact, cattle are, as before stated, often kept for days either to 'cool,' or to suit the exigencies of trade, and, therefore, proper provision should be made for their accommodation. Such provision, it may be added, will have to be made before the 'local authority' will give their 'sanction' to 'establish anew the business of a slaughterer of cattle,' i.e., before a new slaughter-house can be licensed.

"Your Committee have only further to add, in explanation of the defects of existing slaughter-houses, that the premises inspected were, with two or three exceptions, never designed for the use to which they are applied. Most of them are nothing more than ordinary stables, and when the premises are very small, it has been customary to use the coach-house indifferently for killing and as a cart-shed, and the stable for the common use of horse and 'cattle,' using that word in its broad sense. In larger premises some attempt has been occasionally made to separate the stable from the slaughter-house, generally with ill-success, from want of room, etc. Some of the slaughter-houses are only lean-to sheds, or even washhouses in original construction, and the work of adaptation has not proved easy or successful. The situation of many of the slaughter-houses, moreover, in private and other mews near accumulations of foul-smelling refuse cannot but be regarded as objectionable, and extreme care is necessary in order to keep the locality in a wholesome condition by regular cleansing, and by frequent removal of manure, etc."

The Committee then proceeded to specify the slaughter-houses inspected, grouping them as follows:—

1st. Those for which the license will not be applied for again (eleven in number). 2nd. Those to which no opposition need be offered (seven). 3rd. Those that are so objectionable in some respect that the renewal of the license should be opposed (six). 4th. Those the renewal of the license to which should be opposed unless certain specified improvements of the premises are made, of which notice should be given forthwith (twenty-four.) In an appendix the Committee reported the actual condition of each of the slaughter-houses in the third and fourth groups at the time of inspection.

The views set forth in the above report were adopted by your Vestry, and successfully carried out at the licensing session, but not without a good deal of opposition, owing to the fact that the Metropolitan Board of Works had adopted a lower standard of the requirements for a slaughter-house. The Board, for instance,

did not insist on the provision of lairage or poundage for the cattle, nor on a separate entrance to the slaughter-house independent of the shop or dwelling-house; and with one exception they did not oppose the renewal of the licenses. In twenty-four cases, however, your Vestry had served notice of opposition, with a view to obtain certain alterations and improvements, including the provision of adequate lairage effectually separated from the slaughtering place, and the magistrates refused to renew the licenses until your Vestry's requirements had been complied with. With reference to the six slaughter-houses, the entrances to which were through a shop or house, the Justices were requested to view the premises before coming to a decision, and they did so, the result being that they refused to renew five of the licenses on the ground of the general unfitness of the premises. In the remaining case they renewed the license, being favourably impressed by the clean condition of the premises, and by the statement of the proprietor as to the small use made of his slaughter-house. Sheep only are killed, but they have to pass through the shop; up a flight of six steps, along a passage, and down twelve steps into the garden, at the rear of which the slaughter-house is situated.*

Mr. Stimpson, of Church Street, appealed against the decision of the magistrates, having unsuccessfully renewed his application for a license at an adjourned sessions held on the 2nd November.

The appeal was heard on the 22nd January, 1876, your Vestry being represented by counsel, in conformity with the resolution adopted at the meeting held on the 5th January. The decision of the Magistrates was reversed, your Vestry's solicitors having, at the last moment, advised a withdrawal from the opposition to the granting of the license (on Mr. Stimpson agreeing to pay the costs incurred), under an apprehension that it would not be successful, Mr. Stimpson having improved the slaughter-house, and two officials from the Metropolitan Board of Works having been subpoenaed to testify to the excellence of the re-constructed premises. This, however, was not the question at issue, and it may be at once conceded that there would be no objection to the slaughter-house if in a suitable locality. Your Vestry's opposition to the renewal of the license, deliberately entered upon after view of the premises and report by the Works and Sanitary Committee, was based on the fact that the only entrance to the slaughter-house is through the shop. The Magistrates, moreover, who also viewed the premises, gave as an additional reason for refusing the license, "in justice to the sanitary interest of the neighbourhood," that the "premises * * * are surrounded on every side by dwelling houses closely packed."† None of these facts were placed before the Court, which, in granting the license, pointedly alluded

* This license will not be applied for again. (August, 1876.)

† The Magistrates who viewed the premises reported on them in the following terms:—"The entrance to this slaughter-house is through Mr. Stimpson's shop and dwelling-house. The slaughtering here is carried on to a very large extent, amounting to some 18 or 14 cattle per week, and occasionally 120 sheep per week. The premises were well kept, but they are most close and confined, and surrounded

to the absence of any information as to the grounds on which the magistrates based their refusal of the license, and assumed the accuracy of the altogether erroneous statement made by the learned counsel for the appellant, viz., that your Vestry withdrew from the opposition as the works you required to be done, but which had not been carried out when the license was refused, had since been executed to your satisfaction. This result of the appeal, which has decided nothing, is to be regretted, as much in the appellant's interest as on any other ground, for, setting aside any other objection to this particular slaughter-house, the important question raised by your Vestry still awaits a decision of the superior Court, viz., whether premises are fit and proper to be licensed as a slaughter-house to which the only access is through a butcher's shop or dwelling-house?

This failure excepted, your Vestry have every reason to be satisfied with the results of the not inconsiderable labour and time bestowed on this important question. The gains in a sanitary point of view were thus summed up in my report, dated the 20th October, 1875:—

“Last year we had six slaughter-houses approached through shops or dwelling-houses; now there are but two. Last year a very large proportion of the whole number had lairage in, or not separated from, the slaughter-house; now in every premises their is separate lairage. Great improvements have also been effected in the lighting, ventilation, water supply, and general arrangements of the slaughter-houses, which will be used henceforth exclusively for the purpose for which they are licensed.”

I do not mean to imply that we should be satisfied to allow matters to rest as they are, for putting aside the preference I have always avowed for the abattoir system—a system that must sooner or later displace the present one—I venture to say that sanitary authorities should not be content till further improvements have been effected, by new bye-laws, in the existing private slaughter-houses. Among the chief of these contemplated improvements I would mention the following, which have been adopted by the Society of Medical Officers of Health, at my instance, in the form of suggestive new bye-laws, some of them being in the number of the “conditions” the “Board” require in the case of new slaughter-houses. The Report of the Society on these suggestions is couched in the following terms:—

“METROPOLITAN SLAUGHTER-HOUSES.”

“It is the experience of this Society that the construction of existing slaughter-houses in the metropolis, as ordered by the

on every side by dwelling houses closely packed. Two tiny stables containing four horses are in close contiguity to the slaughter-house. The place is very close, and smells offensively. Whilst the justices are sorry to interfere with Mr. Stimpson's business, they cannot, in justice to the sanitary interest of the neighbourhood, recommend a renewal of the license.” It should be stated that Mr. Stimpson has since abolished the stables, and converted them into lairs for cattle and sheep.

Metropolitan Board of Works, is not sufficiently regulated by sanitary considerations. The Health Officers of the Metropolis have opportunity, at the Annual Licensing Sessions, of bringing this consideration under notice of Magistrates, and thus of influencing the sanitary arrangements of slaughter-houses. The Society is of opinion that bye-laws to some such effect as the following are proper to be made by the "Local Authority," and that, meanwhile, the principles of the bye-laws here drafted may usefully and successfully be insisted on by Officers of Health, who should invariably appear at the Licensing Sessions of Magistrates.

1. As to independent entrance :—

That every slaughter-house should have an entrance apart from and independent of any shop or dwelling-house.

2. As to roof ventilation :—

That every slaughter-house shall be open to the roof, and be ventilated by louver ventilators in the roof in addition to any other ventilation that may already exist.

3. As to exact paving arrangements :—

That every slaughter-house should be paved with hard asphalt properly sloped and channelled towards the gully. But if flag stones or hard small bricks are employed, they should be laid on a bed of concrete six inches in thickness and set in cement—no broken stones or open joints being permitted to remain.

4. As to the position and security of drain inlets :—

That the drain inlet should be placed outside the slaughter-house where practicable, and should be guarded by a locked grating, and provided with a stoneware syphon or other approved trap, not being a bell trap. The drain itself should be ventilated, and blood, garbage, and manure should not be permitted to pass into it.

5. As to water and washing arrangements :—

That the water cistern should be made of slate or metal, or of wood lined with metal. It should be properly covered, provided with an overflow or warning pipe, and no waste pipe should be permitted. The requisite taps and hose should be provided, that the walls of the slaughter-house, to the height of six feet at the least, and the floor, may be flushed and cleansed.

6. As to separate and special lairage or poundage :—

That every slaughter-house should be provided with an adequate place for the accommodation or poundage of the cattle about to be slaughtered, with an entrance way for the cattle otherwise than through the slaughter-house. The poundage should be effectually separated from the slaughter-house by a brick partition with sliding or other door, and should be well paved, lighted and ventilated, and should be

kept clean and in good order. The poundage should have no inhabited rooms over it, and should not be used for any other purpose than for the temporary detention of cattle previous to slaughtering.

7. As to position of dung pits :—

That no dung pit or ash pit should be permitted to be near the door or window of a slaughter-house.

8. As to appliances for slaughtering :—

That every slaughter-house should be provided with all the necessary and most approved apparatus and tackle for the slaughtering of cattle.

9. As to hanging of meat :—

That neither the lairs nor any stable should be used as a hanging place for meat.

10. As to inspectors :—

That any interference with an officer in the discharge of his duty, or any molestation, as by the use of abusive language, should be made an offence within the meaning of the bye-laws.

I may here mention that the Commissioners of Sewers, as the "local authority" for the City of London, have framed a code of bye-laws much in advance, in a sanitary point of view, of those prepared by the Metropolitan Board of Works for the rest of the metropolis. It remains to be seen, however, whether the said bye-laws will be confirmed by the Local Government Board.

I have already mentioned that the "Board" opposed the renewal of one license. The ground of opposition was that the paved flooring of the slaughter-house had to be traversed by a horse in going to and from a stable at the rear. The magistrates viewed the premises and overruled the objection; but in other districts, I am informed, a similar objection had been allowed by the justices. It is the fact also that in other districts, licenses were successfully opposed, because sausages were made in the slaughter-houses. Such use of the premises is undesirable, no doubt, and it is contrary to the bye laws. It is strange, however, that the "Board," which refuses to allow a horse to cross a slaughter-house, or a sausage to be manufactured in it, should permit cattle to pass through houses and butchers' shops through which all the products of slaughtering have to be conveyed; and that they should make no provision for separate lairage—allowing animals to be pounded in the slaughter-houses, where they are to be killed, and where the carcasses will subsequently be hung to cool and set! The slaughter-house licenses in Chelsea, Fulham, and Hammersmith, had been granted with scarcely an objection before the Kensington cases were called on, many of the premises in those parishes being without lairage, and approached through a house or shop; and the justices were told while adjudicating on Kensington applications that they were reversing their previous decisions. The Court, however, in the

absence of information, could not have acted differently. I have only to add that when the Kensington butchers found it necessary to provide separate lairage, they succeeded in every instance in doing so, and not one slaughter-house was closed as a result of your Vestry's opposition on this ground. I had the satisfaction, moreover, of being assured by several of the butchers that they were well pleased with the alterations and improvements in their slaughter-houses, which they had not willingly undertaken in the first instance. In several cases these alterations amounted practically to re-construction, and the improvement was really very great, and necessarily of a permanent character.

In leaving this subject, I think it right to explain that the reason for entering into it so fully was, that the past year was a critical one, as the first under the operation of the new Act and the Bye-laws. It seemed only just, moreover, that the prominent, and I may add, exceptional and successful position your Vestry assumed in dealing with an important sanitary question, should be placed on record. It may be reasonably hoped that other sanitary authorities will be encouraged to follow so good an example, and not again surrender one of their most important duties to the "Board" which, at the utmost, has only concurrent powers in the execution of the Act, and is unprovided with a sanitary staff.

LICENSED COWSHEDS.

The licensed cowsheds, 27 in number, viz., 15 in the north, and 12 in the south sanitary district, were inspected by the Works Sanitary and General Purposes Committee in September, and considerable improvements made in the ventilation of several. The licenses were renewed in every case save that of Mr. Bugar, of Thistle Grove, which was successfully opposed by gentlemen living in the locality, on account of the offensive smells alleged to be due to the manner in which the business had been conducted. Mr. Bugar appealed; but the case did not come into Court, as it appeared that the decision of the magistrates in respect of cowshed licenses is final.

The Committee, in a report on the cowsheds which they viewed in July of the current year, expressed an opinion with which I fully agree, on the necessity of legislative powers being given to enable sanitary authorities to frame bye-laws for regulating the conduct of the business of a dairyman, and the structure of the premises (cowshed and dairy) in which the business is carried on.* So many illustrations have been afforded in late years of the

* "Your Committee are satisfied of the necessity of powers being conferred on "Local Sanitary Authorities" to enable them to frame bye-laws for the regulation of the structure of the premises, and the conduct of the business of a cowkeeper or dairyman. Until such powers are conferred, your sanitary staff can only insist that the premises shall be kept clean; that the manure shall be regularly removed, and that ventilation shall be duly attended to. In default your Vestry may object to the renewal of the license. In the respects specified, and particularly as regards ventilation, the improvements effected by order of your Vestry last year, are not inconsiderable." *Report of Works, Sanitary, and General Purposes Committee, July, 1876.*

dangers arising from the use of contaminated milk, and the facility with which this fluid may become contaminated, that there is now a pretty general consensus of opinion as to the necessity of such regulation.

It may be stated generally that disease in man may be caused through the agency of milk; (1.) By insanitary conditions in the cowshed and in the dairy, viz., through the absorption by the milk of sewer gas or the products of excremental decomposition; (2.) by the pollution of water; (3.) by the use of improper or unwholesome food for the cows; (4.) by disease in the cows themselves; and (5.) by disease derived from the employés in the cowshed and dairy. The simple enunciation of the means by which disease may be propagated, furnishes a clue to the proper subjects of bye-laws. These are (1.) The position, construction, and sanitary condition of the sheds, including questions of cubic and floor space, water supply, lighting, ventilation, drainage, paving, &c.; (2.) everything relating to the health and management of the cows, including quarantine arrangements, the isolation of sick animals, the quality and storage of the food; (3.) the sanitary condition of the dairy and of the vessels used for receiving, storing, and distributing milk; and (4.) the state of health of the persons engaged in the conduct of the business.

In a paper read before the Society of Medical Officers of Health last year (1875,) and since published, I submitted a suggestive code of bye-laws based on the above views. The Society by which the importance of the question is well understood, referred the bye-laws to the Council, which reported them to be, "with some slight alterations which have been made, suitable for the purpose." The Report of the Council having been adopted, the bye-laws, which are subjoined, were published with the *imprimatur* of the Society, and with the following introductory note:—

"This Society has had under consideration the necessity for placing cow-sheds and dairies, and the business of a dairyman, under proper regulations. The subjoined rules embody the sanitary principles which the Society would desire to see enforced.

"There is at present no power to make bye-laws on the subject: but, in the expectation of early legislation conferring such power, the principles desirable to be observed are here drawn up in the form of bye-laws. Meanwhile, until the power of framing bye-laws is given, the subjoined regulations will serve to indicate the conditions the Society considers should be taken into account by sanitary authorities, and magistrates who are concerned in the licensing of cow-houses in London and other towns.

"The proposed rules are divided into two classes; the one class comprising those regulations which in the Society's opinion are proper to be insisted on in all cases; the other class comprising those regulations which the Society regards as desirable to be

enforced in all new cow-sheds and dairies, but on which it would not be expedient to insist in the case of all cow-sheds and dairies at present established."

CLASS I.

1. Every cow-shed shall be properly lighted and ventilated by louvred sky or side-lights.
2. Every person occupying a cow-shed shall cause the inner walls to be covered with hard, smooth, impervious material to the height of five feet, at the least, from the floor, and the doors and other wood work, excepting the divisions between the stalls, to be thoroughly well painted.
3. Every person occupying a cow-shed shall cause it to be well paved with asphalt, iron-stone bricks, or flag-stones, set in cement, on a bed of concrete, and laid with a proper slope and channel towards a gully, which shall be situated outside the shed; and which shall be properly trapped and connected with the public sewer by an adequate drain of glazed pipes.
4. Every person occupying a cow-shed shall cause it to be provided with a trough manger, constructed of some hard impervious material, and sufficiently sloped to allow it to be readily cleansed by flushing.
5. Every person occupying a cow-shed shall cause it to be provided with an adequate and properly constructed receptacle, made of impervious material, for the supply of water, which shall be closely covered, and provided with an overflow or warning pipe unconnected with any drain: the receptacle to be so placed that the bottom thereof shall not be less than six feet above the floor level. The water to be of good quality, and to be procured from a public water company, where practicable. (The use of shallow-well water should be strictly prohibited).
6. Every person occupying a cow-shed shall provide a proper place for the storage of fodder, and, if brewer's grains be used as food, a covered receptacle made of impervious material for the storage of the grains shall be provided, such receptacle to be situated outside the cow-shed, to be properly drained, and to be sub-divided into two parts by a partition, so that each part may be thoroughly cleansed in turn, and be kept free from any offensive smell.
7. Every person occupying a cow-shed shall provide a proper covered place or receptacle outside the shed for the reception of dung and other refuse; the bottom thereof to be constructed of flag-stones or cement laid on concrete, and the sides to be constructed of flag-stones, or brick lined with cement.
8. Every person occupying a cow-shed shall cause all needful work to the premises to be forthwith done and executed, and shall not allow any alteration to be made in respect of the paving, drainage, water supply, or ventilation to or in the premises, without the consent of the local sanitary authority.
9. No person occupying a cow-shed shall allow any water-closet, privy, cesspool, or urinal, to be within, or to communicate directly with such cow-shed.
10. No person occupying a cow-shed shall allow any inhabited room, or workshop, to be situated over it on any pretext whatever.
11. Every person occupying a cow-shed shall keep in it only such number of cows as shall be specified on his licence; the space for each cow shall not be less than 800 cubic feet; no height of the shed in excess of sixteen feet shall be taken into account in estimating the cubic space. The stalls for single cows shall not be less than four

feet in width, and a double stall for two cows shall not be less than seven feet six inches in width. The stall partitions shall not extend in front beyond the front line of the manger, and shall leave a clear open space above the manger.

12. Every person occupying a cow-shed shall cause the inner walls, and every part of the premises, to be kept thoroughly clean and in good order and repair at all times; and shall cause the inner surface of the roof and of the upper portion of the walls to be thoroughly washed with quicklime at least once in every quarter, viz., in the months of January, April, July, and October, and the woodwork of the stalls at least once in every four weeks.
13. Every person occupying a cow-shed shall cause it to be thoroughly flushed and cleansed twice every day, viz., before nine a.m., and after four p.m.; and the yard to be cleansed at least once every day.
14. Every person occupying a cow-shed shall cause all dung manure to be removed daily in a properly constructed vehicle, before 8 a.m., or where not more than four cows are kept, every other day.
15. No person occupying a cow-shed shall allow it to be used for any purpose other than that for which it is licensed, or shall keep or permit to be kept therein any fowl, or any pig, horse, dog, or any other animal, except cattle.
16. Every person occupying a cow-shed shall give notice in writing within twenty-four hours to the local sanitary authority, of the existence of any contagious or infectious disease amongst his cows, and shall cause all diseased cows to be milked on to the ground.
17. Every person occupying a cow-shed shall give twenty-four hours' notice to the local sanitary authority of his intention to remove from the shed any cow for the purpose of being slaughtered for the food of man.
18. No person occupying a cow-shed shall allow any person suffering from an infectious disease, or living in a house where such disease exists, to enter the cow-shed or dairy, or in any way to assist in the conduct of the business, during the continuance of such disease, or until all danger of the spread of infection shall have ceased, and every infected room and article shall have been disinfected to the satisfaction of the medical officer of health of the district. The occupier shall give immediate notice in writing to the medical officer of health of the district of the existence of any such infectious disease.
19. Every person occupying a cow-shed or a dairy shall provide for use therein a sufficient number of receptacles made of non-absorbent materials for the reception, storage, and delivery of milk, and shall cause them to be at all times kept thoroughly cleansed and purified; and shall cause all milk to be removed without delay from the cow-shed, and shall not add to milk any substance for the purpose of altering its colour.
20. Every person occupying a cow-shed shall cause all the cows therein to be curried and cleansed every day, and to be well fed on sound, sweet, and wholesome food, and to be provided with good water at all necessary times. Distiller's wash shall not be used as food for the cows.
21. Every occupier of a cow-shed or a dairy shall allow any member of the local sanitary authority, in addition to all other persons lawfully entitled to admission, to have free access to every part of the business premises at all reasonable hours.
22. Penalty Clause. (N.B.—The penalty for selling the milk of diseased cows should be heavy, even to the extent of giving magistrates the power of imprisonment.)

CLASS II.

Regulations for New Cow-sheds and Dairies.

23. Every new cow-shed shall be a detached building, situate in its own yard, and not within twenty feet of any inhabited building, and shall be provided with a paved passage behind the manger at least three feet in width.
24. Every new cow-shed shall be provided with a quarantine shed, effectually separated from the cow-shed, for the reception of cows newly brought on the premises ; and such cows shall be kept in quarantine for a period of twenty-one days before removing them into the cow-shed.
25. Every occupier of a cow-shed shall provide a shed to be called the "Infirmary," which shall be effectually separated from the cow-shed, for the reception of cows suffering from contagious disease, and such cows shall be placed and kept therein until recovery, removal, or death takes place.
26. Every dairy shall be well paved with asphalt, iron-stone bricks, or flag-stones, laid on concrete, and set in cement; the inner walls and all woodwork shall be covered with hard, smooth, impervious material to the height of six feet from the ground. The dairy shall have no direct communication with any inhabited dwelling room, and there shall not be within it any drain or other communication with a sewer, nor any water-closet, or privy within or contiguous to it. The dairy shall, at all times, be kept clean, and in good order and repair, and it shall not be used for any other purpose than that for which it is licensed.
27. Every dairy shall be provided with a sufficient number of tables of slate, marble, galvanized iron, or other impervious material, for the reception of the vessels containing milk, all of which shall be thoroughly washed and cleansed every morning and evening after the milk shall have been sent out.
28. Any person who shall make application to the local sanitary authority for sanction to establish anew the business of a dairyman, shall furnish with such application a plan of the premises and sections of the building in which it is proposed to carry on such business, drawn to the scale of a $\frac{1}{4}$ -inch to the foot, and showing the provision made, or proposed to be made, for the drainage, lighting, ventilation, and water supply of the same ; and shall also furnish a key-plan of the locality, showing the buildings and streets within 100 yards of the premises, drawn to the scale of five feet to the mile.
29. Penalty Clause.

Definition of Terms—Throughout and for the purposes of these bye-laws, "the premises" shall include all the premises used for the business of a dairyman ; "cow-shed" shall mean that portion of the premises wherein cows are stalled or kept ; "dairy" shall mean that portion of the premises which is used for the storage and for the vending or sale of milk ; "occupier" shall be construed to mean the person owning, renting, or holding, or rated for, premises where the business of a dairyman is-carried on ; and "dairyman" shall mean any and every person whose business is the keeping of cows for the production of milk, or whose sole or chief business is the vending or sale of milk for the food of man.

The Society, I may add, directed a copy of the proposed bye-laws to be forwarded to the Local Government Board. The President had already promised his best attention to the subject on receipt of a copy of my paper, and the Board renewed that assurance when acknowledging the communication addressed to

them by the Secretaries of the Society. There is good reason to hope that in the next session of Parliament the necessary legislative powers for framing bye-laws will be granted.

As bearing on this point the subjoined "Parliamentary intelligence" (February 21st, 1875), which I extract from the *British Medical Journal*, will be read with interest:—

"*Typhoid Fever at Eagley.*—Mr. Charley asked the President of the Local Government Board whether his attention had been called to the recent fatal outbreak of typhoid fever at Eagley, near Bolton, in Lancashire, which was attributed by the Medical Officer of Health to the pollution of milk by water filled with sewage, used for washing the milk cans; and whether, in view of the numerous and fatal outbreaks of a similar kind in Islington, Marylebone, Glasgow, Jarrow, and other places, which had been after due investigation attributed to a similar pollution of the milk supply, he would consider the expediency of introducing a measure for the protection of health by special sanitary supervision of dairy-farms, and of the premises in which milk is stored prior to sale by urban milk-vendors? Mr. Sclater-Booth said that his attention had been called to the question, and he caused immediate enquiry to be made of the sanitary authorities of the locality, who gave a most deplorable account of the ravages of fever in that particular district. Two facts came out, though the enquiry was not quite concluded. In the first place, it would appear that the milk in question, though poor in character was not greatly adulterated with water; and secondly, the cans had been washed with water from highly polluted sources. He could not say that he had it in contemplation to introduce any measure for the protection of health by special sanitary supervision of dairy-farms, but he was aware of the advisability of passing bye-laws, and the subject would receive his consideration."

BAKEHOUSES.

The bakehouses, 113 in number, viz., 64 in the north, and 49 in the south sanitary district, have been frequently inspected, and the provisions of the Act relating to them carried out as efficiently as possible.

WATER SUPPLY.

Information respecting the water supply is now derived from two independent sources, viz., from the chemical reports prepared by Professor Frankland, F.R.S., for the Registrar-General, and the Engineering Reports by Mr. Frank Bolton, the water examiner under the Metropolis Water Act, 1871. From Professor Frankland's reports, we learn that the temperature of the Thames water as supplied by the Chelsea, West Middlesex, and Grand Junction Companies, varied from 34°.7 Fahr. in December, to 66°.5 in August, a range of 31°.8, the water being unpleasantly warm in summer, and bordering on the freezing point in winter; while the

temperature of the deep well water of the Kent Company, unaffected by the season, had a range of only 5°, viz., from 50°.9 in December, to 55°.9 in May.

The solid impurities in the river water—some of which are organic, very largely of animal origin, highly objectionable, and at times eminently noxious, whilst others are entirely or comparatively harmless, which had progressively increased during the years 1871-2-3, and diminished in 1874,—underwent a considerable increase in 1875, the maximum being observed in December, and the minimum in July; whilst in the deep well water of the Kent Company, which is taken as the standard of purity for the sake of comparison, the amount was the same as in 1874, a large amount, but of a harmless character.

It is remarked that notwithstanding the application of partial remedies for sewage pollution at Banbury, Eton, and Windsor, and the greater care exercised by most of the companies in the storage and filtration of the water, the organic pollution contained in the Thames water delivered in London does not diminish. The maximum organic pollution occurred in January, February, March, August, and November. Of the three companies supplying this parish, the West Middlesex Company delivered the best water. The following table shows the amount of organic matter in the several supplies, the Kent Company's water being taken as the standard for comparison :—

Name of Company.	Maximum.	Minimum.	Average.
Kent	1.0	1.0	1.0
West Middlesex	7.6	2.1	4.1
Grand Junction	7.4	2.0	4.2
Chelsea	7.9	2.2	4.4

The water of the Thames is at its source as free from pollution as the chalk well water, but in its downward course becomes largely contaminated by sewage and the washings of cultivated land, particularly during the winter.

This water, moreover, is hard, and large quantities of soap and soda are required to soften it before it is used for washing, but the softening could be accomplished for a small fraction of the expense by substituting lime for soap or soda, as practised on similar waters at Aylesbury, Canterbury, Caterham, and Tring. For drinking, however, it would appear, as the result of considerable inquiry into rates of mortality in different districts, that soft and hard (but not excessively hard) waters, if equally free from deleterious organic substances, are equally wholesome.

The following table exhibits the degree of efficiency of filtration of the water as supplied by the Companies in this parish :—

Name of Company.	Number of occasions when clear and transparent.	Number of occasions when slightly turbid.	Number of occasions when turbid.	Number of occasions when very turbid.
Chelsea	8	4	1	0
West Middlesex	13	0	0	0
Grand Junction	3	6	4	0

The natural filtration which the Kent Company's deep well water undergoes through an enormous thickness of chalk, is the cause of its uniform clearness and transparency, which renders it independent of artificial filtration.

When examined by the microscope, the sediment deposited by turbid water on standing, is almost always found to contain numbers of living and moving organisms. The annexed table shows the results of such microscopic examinations during the past seven years :—

Name of Company.	Number of occasions when living organisms were found.						
	1869.	1870.	1871.	1872.	1873.	1874.	1875.
Chelsea	3	2	2	3	2	5	4
West Middlesex	0	0	0	0	0	0	0
Grand Junction	4	1	1	2	3	5	7

The subjoined table exhibits the averages, for 1875, of solid impurity; and other particulars, the numbers relating to 100,000 parts of each water :—

NAME OF COMPANY.	Temperature in Centigrade Degrees.	Total Solid Impurity.	Organic Carbon.	Organic Nitrogen.	Ammonia.	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contamination. (Estimated.)	Chlorine.	Total Hardness.	Proportionate Amount of organic Elements, that in the Kent Company's Water being taken as 1.
Chelsea	11·8	26·46	·211	·039	·001	·155	·196	1250	1·97	19·3	3·7
West Middlesex ...	12·5	26·62	·176	·028	·001	·124	·153	930	1·83	19·4	3·0
Grand Junction ...	11·4	27·00	·186	·033	·001	·129	·161	990	1·93	20·0	3·3
Kent	12·4	40·36	·067	·012	·000	·371	·383	340	2·48	28·1	1·0

From Mr. Frank Bolton's reports we learn that the West Middlesex Company are giving constant supply to a number of houses on the application of the owners, and are fully prepared to extend the system as required: as a matter of fact, however, the number of houses having constant supply is small. The construction of a new filter bed at Barnes, of two acres area, is progressing. The Company having large reservoir capacity for subsidence avoid taking in water during floods.

The construction by the Grand Junction Company of further impounding reservoirs for subsidence at the intake at Hampton (so as to avoid the flood waters) is in contemplation, as this Company will require such reservoirs before they can deliver effectually filtered water during the period when floods prevail.

The Chelsea Company's new works, which I referred to in my last annual report, are progressing rapidly; the pumping main has been laid, and the water is now taken in at West Molesey instead of at Seething Wells. The impounding reservoirs are also progressing upon the land (comprising an area of about 50 acres necessary for their construction) near Molesey. The erection of the necessary engine power is in progress; meanwhile, temporary engines have been fixed to afford supply from the new intake, and the Company are urging on the completion of

their new works with all possible despatch. We may hope, therefore, that this Company will soon be in a position to supply water as good as that of any other Company, and that the Companies generally will be able to supply all parts of the parish with clear and transparent water.

The question of constant supply, however, makes very slow progress, though there is no doubt of the power of the "Metropolitan authority" (Metropolitan Board of Works) to demand it, or of the power of the Companies to give it. In the East of London the East London Waterworks Company are giving constant supply to very large areas, and the same may be said of the district supplied by the Kent Company. Constant supply for domestic purposes, however, without the abolition of cisterns, would be a doubtful gain, the principal cause of pollution of water being the dirty neglected state of the receptacles which are often left uncovered and rarely cleaned out—the latter defect being in many cases attributable to the difficulty of getting at them. As a rule the water is delivered clear and transparent, filtration being effectual, especially by those Companies that have provided large reservoirs in which the water is allowed to stand for some days to allow of the subsidence of suspended impurities. But it is of little use getting clear water if it is put into dirty tubs or similar receptacles. Domestic filters, moreover, are often a delusion, being left undisturbed for long periods, as though they were capable of self-cleansing. It is not uncommon to receive complaints of bad water even when the water has been filtered on the premises, the cause being a dirty cistern or a dirty filter. Moving organisms have in such cases been perceptible to the naked eye—and the entire subject of complaint has been removed by a little attention to cleanliness.* It would be well, however, if local sanitary authorities were clothed with greater powers in dealing with questions of water supply, which are now governed by regulations framed by the Companies and sanctioned by the Board of Trade, whose powers have since been transferred to the Local Government Board. As these "water regulations" were settled after an exhaustive enquiry by a Government commission, at which the Companies and the Metropolitan authority were represented, there can be no doubt that sanitary purposes were contemplated, as well as the prevention of waste: but practically the regulations are carried out (when acted on at all) as if the prevention of waste were the sole object of them. As an illustration I may more particularly allude to the 14th regulation, which runs thus: "No

* The subjoined extract from one of my monthly reports will bear repetition: A fatal case of diphtheria in a house in Elsham-road led to the premises being inspected with the following results: "The cause of the illness would appear to have been the unsanitary condition of the house. There are two water-closets in the centre of the house and ventilating into it. The large water cistern in the roof was found uncovered and in a filthy condition, while the cistern in the basement contained the wing cases of hundreds of cockroaches, whose bodies had been slowly macerated and consumed by the household. The larger cistern, moreover, was in direct communication with the soil-pipe by means of the waste-pipe. In all probability these cisterns had not been cleansed for years."

overflow or waste pipe, other than a 'warning pipe' shall be attached to any cistern supplied with water by the Company: and every such overflow or waste pipe existing at the time when these regulations come into operation shall be removed, or at the option of the consumer shall be converted into an efficient "warning pipe" within two calendar months next after the Company shall have given to the occupier of, or left at the premises in which such cistern is situate, a notice in writing requiring such alteration to be made." This regulation is practically a dead letter.* Nearly all cisterns still have ordinary waste-pipes, and in very many cases these are in untrapped communication with a drain or with the soil-pipe of a water-closet. If there is no "waste" the Companies have no motive for interfering. But the danger in a sanitary point of view is greatest when there is no "waste," as the trapping of the waste-pipe is usually effected by a S bend: so that when, as generally is the case, the mouth of the waste-pipe is above the water level, the pipe is constantly empty and dry, and no obstacle is offered to the passage of sewer gas into the cistern. This constitutes an undoubted nuisance, and in individual cases it may be abated by legal proceedings:—such, at least, is the experience of some Medical Officers of Health, though Police Court decisions are not uniform. But what is wanted is a general plan of enforcing the regulation, and abolishing the waste pipe wherever it is connected with a drain or a soil-pipe of a water-closet, or so situated as to endanger the pollution of the water. The Companies alone can enforce the regulation. The West Middlesex Company, however, do not enforce it excepting in special cases which come under their notice, and for the prevention of waste: this Company, taking the view that the 14th regulation must be read with the 33rd, which enacts that "all existing fittings which shall be sound and efficient, and are not required to be removed or altered under these regulations shall be deemed to be prescribed fittings under the "Metropolis Water Act, 1871." But surely the waste-pipe is a fitting that is "required to be removed or altered," under these regulations, viz., by the 14th! The Grand Junction Company have not adopted the regulations, and having a very abundant supply of water, are not under any anxiety respecting the amount of waste. These Companies, moreover, have no regular staff of inspectors whose sole duty it is to see that the regulations in respect of fittings are carried out. The Chelsea Company, on the other hand, employ three inspectors for this purpose, and there can be no doubt that much advantage has accrued to the district supplied by this Company from the systematic manner in which the fittings have been overhauled, and when necessary "removed or altered." I have it on the authority of the Secretary of the Company, that the waste pipe has been removed in

* Mr. Frank Bolton in his report for August, remarks that the 14th regulation should be "strictly enforced," and he gives some very cogent reasons for this opinion; but, as I have shown in the text, it is more easy to prove the necessity of such observation of the bye-law than to enforce it.

some thousands of houses in this Company's district, and that in course of time the whole of the cisterns will be provided with warning pipes as prescribed by the 14th regulation. The inspector assures me, moreover, that no practical difficulty is experienced in effecting the alteration, the inhabitants generally, on explanation, recognising the value of it. It is almost superfluous to say that what has been done by one Company may be done by the others; and if the Companies are unwilling to do the work, local sanitary authorities should have co-ordinate jurisdiction with them, and be empowered to serve the necessary notices for the abolition of the waste-pipe in all proper cases. It is curious that the law should be so stringent with respect to offences under the Act, viz., for fouling the water in bulk—every precaution being taken to secure the water being brought in a state of purity to the cistern—and then so absolutely indifferent as to what becomes of it afterwards. We must not pollute the water in bulk, and so poison our neighbours, but we may commit constructive suicide by allowing emanations from sewers and water-closets to enter our water cisterns.

The regulations, it may be added, may be altered, and the mode of procedure, to obtain such alteration, is specified in the Act, viz., by an application to a water company by the "Metropolitan authority," or by any ten consumers of water supplied by the Company. to repeal or alter any of the regulations, or to make new regulations instead of any of them: and if the Water Company refuses to comply, the Local Government Board may, if they think fit, appoint a competent and impartial person of engineering knowledge and experience, to report to them, . . . as to the expediency of altering or repealing regulations, or of making new regulations in conformity with such request as aforesaid, and on the report of such person, the Board may make such repeal or alterations as they think fit. I would, therefore, beg to recommend that the Metropolitan authority (Metropolitan Board of Works) be asked to make request as aforesaid, so as to enable local sanitary authorities to enforce such of the regulations as have a sanitary bearing.

GAS.

During the year there has not been any complaint made to me on the subject of gas supply in this parish.

The subjoined tables are taken from the quarterly reports of the chief gas examiner.

1. Maximum, minimum, and average lighting power of the gas in standard sperm candles at the testing place Ladbroke Grove, Notting Hill:—

	Maximum.	Minimum.	Average.
Quarter ended Mar. 31st, 1875	18.0	16.1	16.92
Quarter ended June 30th, 1875	18.1	16.0	16.97
Quarter ended Sept. 30th, 1875	18.0	16.3	16.88
Quarter ended Dec. 31st, 1875	18.2	15.9	16.93
Averages, whole year ..	18.07	16.07	16.92

The gas would therefore appear to have been always (with one exception, viz., 15.9 on the 1st November) up to the standard lighting power of 16 candles.

2. Grains of sulphur per 100 cubic feet of gas—

			Maximum.	Minimum.	Average.
1st Quarter	..	..	31.9	8.7	19.40
2nd „	..	..	16.6	6.5	10.40
3rd „	..	..	19.1	7.4	11.77
4th „	..	..	20.7	6.8	12.99
Averages	..	..	22.07	7.3	13.64

The prescribed quantity of sulphur impurity (viz. 25 grains in 100 cubic feet of gas) was exceeded on four occasions in the first quarter, viz., on January 9th (29 grains), 11th (31.9 grains), and 12th (29 grains), and February 25 (25.4 grains): but on no occasion in the other three quarters, the purity of the gas in this respect being generally considerably above the requirements of the gas referees.

Sulphuretted hydrogen, which is absolutely disallowed, was not found on any occasion, and the quantity of ammonia was very much below the prescribed amount, viz., $2\frac{1}{2}$ grains in 100 cubic feet.

The most interesting fact in connection with gas supply during the year is that your Vestry, following the example of other parishes, have resolved to adopt the "average meter" system, so as to pay only for the amount of gas actually consumed.

MORTUARY AND DISINFECTING CHAMBER, &c.

Numerous articles have been disinfected, free of cost for poor persons, after infectious diseases, and a still larger number have been disinfected at the cost of the owners who were able to bear the expense. All, or nearly all disinfection is done at Notting Hill by a firm who have the requisite conveniences; but it is eminently desirable to provide a parochial disinfecting chamber. This and a mortuary are among our chief sanitary *desiderata* at the present time. With reference to the mortuary, I am still of opinion that whenever it is provided, there should be attached to it a court room for holding inquests, and all the conveniences necessary for *post-mortem* examinations, in order to avoid the necessity of resorting to public houses, and making them in the dwellings of the poor; it being no uncommon experience that such examinations are made in the single room used for all purposes, and at all times by an entire family. If such a mortuary, with a striking semi-ecclesiastical elevation, and in a good position, were provided, it would be of great service; but a mean looking building, hidden away in a corner, would be less likely to prove a success. If one mortuary only were provided for this extensive parish, it should be centrally situated though it is most wanted in the northern section of the parish. It would be well, however, to provide two, one in

the north, and one on the site that has always appeared to me very suitable for such a building, namely, in the disused burial ground of the parish church. A mortuary in this place (and surely none more fitting for the temporary reception of our dead!) could be superintended by the keeper of the Vestry Hall: the bodies of the poor on which inquests have to be held could be removed to it, and doubtless arrangements could be made to enable the coroner to hold his court at the Vestry Hall, old or new. The average yearly number of inquests is about 160—say three a week—and it is the custom when practicable, to hold two or more inquests on the same day, so that no great inconvenience would arise if such an arrangement were carried out; and I have reason to believe that it would be acceptable to the coroner, whom I consulted on the subject some years ago. It may, perhaps, be alleged that jurymen would be put to unnecessary trouble in coming long distances from north and south to the centre of the parish, but in answer to this it is only necessary to observe that by a discreet exercise of his powers in selecting jurors (who are usually drawn from the locality of the deaths) the coroner's officer could reduce the probable inconvenience to an insignificant minimum.

BATHS AND WASH-HOUSES.

The question of baths and wash-houses was not mooted last year; I venture to hope, however, that as soon as the new Vestry Hall question has been settled this will be taken in hand. The St. Pancras Vestry are erecting a second establishment for the convenience of their numerous constituents. The East of London is moving in the matter. St. George's, Hanover Square; St. Margaret's, Westminster; and St. James', have public baths; Hammersmith has provided baths through the agency of a limited liability company, and Chelsea is doing the same. Kensington will be last in the race, and would be badly off indeed but for the propinquity of the superb establishment provided by the Paddington Vestry in the Queen's Road, Bayswater. Let us hope, however, that if we are "last" we shall be the reverse of "least;" and that when we do build baths and wash-houses they will be on a scale commensurate with the size and grandeur of the parish, and replete with all the improvements suggested by experience.

In concluding my report, I have again the satisfaction of acknowledging the courteous readiness of the parochial officers generally to assist me in the performance of my duties, by information of infectious diseases, etc. The Guardians and the Dispensary Committee have always exhibited a desire to co-operate with your Vestry in measures for improving the public health. The sub-district registrars of deaths, etc. (Messrs. Barnes and Hume) spare no trouble to supply me with inform-

ation on all matters connected with their department. My efforts are well seconded by the sanitary inspectors, who perform their onerous and important duties with care and fidelity. Lastly, I have to express my obligations to your Vestry for the confidence placed in me, through which the work of my department is greatly facilitated.

I am, Gentlemen,

Your obedient Servant,

T. ORME DUDFIELD, M.D.,

Medical Officer of Health.

VESTRY HALL KENSINGTON,

August, 1876.

APPENDIX.

NOTE.—The forms for Tables I.—VI. have been settled by
the Society of Medical Officers of Health to ensure
uniformity of Statistical returns.

TABLE I.

Estimated population 1875, at the middle of the year, and in 10 previous years ; number of inhabited houses ; Births, Deaths, and Marriages (gross numbers).

Year.	Estimated Population *	Number of Houses.	Registered Births.	Deaths.	Marriages.
1875.	143,500	18,444	4,478	2,786	1,346
1874	138,000	17,667	4,356	2,696	1,311
1873	133,000	16,920	4,182	2,436	1,243
1872	127,400	16,206	4,041	2,171	1,132
1871	121,500	15,394	3,804	2,328	1,131
1870	116,350	15,279	3,705	2,473	892†
1869	111,350	14,654	3,625	2,249	891†
1868	106,350	14,029	3,522	2,232	984†
1867	101,350	13,404	3,158	1,933	974†
1866	96,350	12,779	3,060	1,966	984†
1865	91,350	12,154	2,619	1,733	920†
Average of 10 years, 1865-1874	114,300	14,848	3,609	2,221	"

Notes.—Population at Census, 1871, 120,234.

Area in Statute Acres, 2,190.

Average number of persons in each house at Census, 1871, 7·8.

* The population is estimated to the middle of the year. Between 1863 and 1871 inclusive, a yearly addition has been made to the population based on the known increase between the Censuses of 1861 and 1871. The same principle has been adopted with regard to the number of inhabited houses, in the absence of specific information on the subject, such as has been forthcoming since 1871. Some of the figures in this and subsequent Tables differ from those in former reports, as the result of a revision of the estimated population, based upon the best attainable information. The population at the Census, 1861, was 70,108.

† The returns of marriages for the years 1865-70, inclusive, do not include those that took place at the Superintendent Registrar's Office, concerning which I have no information.

TABLE II.

Showing Birth & Death Rate: Deaths of Children, & Deaths in Public Institutions 1875, & 10 previous years.

The Year.	Births per 1000 of the population.	Death rate per 1000 living.	Deaths of Children under 1 year per cent. to Total Deaths.	Deaths of Children under 1 year per cent. to Registered Births.	Deaths of Children under 5 years per cent. to Total Deaths.	Deaths in Public Institutions
1875.	31·2	19·4	25	15·6	40·3	338*
1874	31·7	19·5	28·5	17·5	45·4	352
1873	31·4	18·3	27·0	15·9	40·0	272
1872	32·1	17·0	28·9	15·6	44·2	264
1871	31·3	19·1	25·0	15·0	41·6	252
1870	32·1	21·2	24	16·4	42·9	330
1869	32·5	20·2	†	†	†	318
1868	33·1	21·0	†	†	†	303
1867	31·2	19·0	†	†	40·6	321
1866	32·0	20·4	†	†	41·6	248
1865	28·7	19·0	†	†	†	250
Average of 10 Years, 1865-1874	31·6	19·4	†	†	42·3	280

* Viz. The Workhouse (196), and the Hospital for Chest Diseases at Brompton (148).

† No information.

NOTE.—The calculations in this Table are made on the gross number of deaths registered without deduction of those of non-parishioners at public institutions.

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TABLE IV.

Showing Mortality from certain classes of Diseases, and proportions to Population, and to 1,000 Deaths, 1875, viz.—

Diseases.	Total Deaths.	Deaths per 1000 of Population.	Proportion of Deaths to 1000 Deaths.
1. Seven Principal Zymotic Diseases... ..	372	2.5	133
2. Pulmonary (<i>other than Phthisis</i>)	577	4.0	208
3. Tubercular	367	2.5	133
4. Wasting Diseases of In- fants (<i>under 5</i>) ...	184	1.2	66
5. Convulsive Diseases of Infants (<i>under 5</i>) ...	176	1.2	63

NOTES.

1. Includes Small Pox, Measles, Scarlet Fever, Diphtheria, Whooping Cough, Fever and Diarrhœa.
3. Includes Phthisis, Scrofula, Rickets, and Tabes.
4. Includes Marasmus, Atrophy, Debility, Want of Breast Milk, and Premature Birth.
5. Includes Hydrocephalus, Infantile Meningitis, Convulsions and Teething.

TABLE V.

Showing the number of Deaths in the 10 years, 1865-74, from the seven principal Zymotic Diseases, and the number in 1875, &c.

Disease.	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	Annual Average 10 years, 1865-74.	Proportion of Deaths to 1000 Deaths in 10 years, 1865-74.	1875	Proportion of Deaths to 1000 Deaths in 1875.
Smallpox	18	10	29	4	6	8	120	68	1	0	26.4	11.9	0	0
Measles	52	40	19	84	27	70	64	43	38	121	55.8	25.0	23	8.2
Scarlet Fever.....	31	28	35	170	106	198	95	29	10	32	73.4	33.2	83	29.5
Diphtheria.....	Not separately registered.				9	14	11	14	11	26	8.5	3.8	23	8.2
Whooping Cough...					71	55	72	77	44	45	53.1	24.3	107	38.4
"Fever"	77	33	46	52	42	46	48	42	41	52	47.9	21.7	29	10.4
Diarrhoea	104	112	78	113	108	154	129	110	145	112	116.5	52.6	107	38.4
Total, KENSINGTON	319	251	275	457	369	545	539	383	290	388	331.6	172.5	372	133
Total, LONDON	14,272	14,761	11,660	14,925	17,413	16,476	19,455	12,699	11,385	11,230	14,427	178	13,411	164
TOTAL, ENGLAND & WALES 1863-72*	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1863-72	1863-72.	1873	1873
	98,490	96,279	92,080	82,692	72,587	97,352	90,380	100,497	108,801	91,743	92,584	188	89,286	181

* The Totals for England and Wales are for the ten years 1863-72, compared with 1873, the last year of publication at the present time.

TABLE VI.

Inspector's Report of the Sanitary Work completed in the year ended March 25th, 1876.

Sub-districts.	No of Complaints received during the year.	No. of Houses and Premises, &c., inspected.	Results of Inspection.			House. Drains.		Privies and W.C.'s.			Dust Bins.		Water Supply.		Miscellaneous.							
			Orders issued for Sanitary Amendments of Houses and Premises.	Houses, Premises, &c., Cleaned, Repaired and Whitewashed.	Houses Disinfected after Infectious Diseases.	Repaired, Cleaned, &c.	Trapped or Ventilated.	Repaired, Covered, &c.	Supplied with Water.	New provided.	New Provided.	Repaired, Covered, &c.	Cisterns (new) erected.	Cisterns Cleaned, Repaired and Covered.	No. of Lodging Houses registered under 35th Clause of Sanitary Acts, 1866.*	No. of Dust Complaints received and attended to.	Removal of accumulations of Dung, Stagnant Water, Animal and other Refuse.	Removal of Animals, &c., improperly kept.	Bakehouses.	Licensed Cowhouses.	Licensed Slaughtershouses.	Other Proceedings, <i>eg.</i> Legal Proceedings.
North.	764	2492	748	642	32	189	84	156	76	3	12	42	11	42	...	2037	79	112	64	15	21	53
South.	793	2364	761	465	20	196	62	172	48	1	7	27	5	28	..	2738	68	16	49	12	12	5
Total.	1557	4856	1509	1107	52	385	146	328	124	4	19	69	16	70	...	4775	147	128	113	27	33	58

* The Act has not been put into operation.

TABLE VIa.

Summary of Monthly Returns of Sanitary Work done by the Inspectors.

Date of Report.	Houses Inspected.		Mews Inspected.		Slaughter Houses Inspected.		Cowsheds Inspected.		Bakehouses Inspected.		Offensive Trades Inspected.		Sanitary Orders Issued.		Letters &c. Received re Dust Removal.		Complaints of non-removal of Dust.		Orders Issued for the removal of Dust.		Date of Report.
	North	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South	
May 5, 1875	184	164	18	17	9	7	8	8	11	10	7	0	60	68	687	310	51	18	1163	559	May 5, 1875
June 2 "	212	229	19	18	8	8	10	7	9	10	8	0	44	39	245	209	50	21	566	429	June 2 "
June 30 "	186	198	18	16	10	8	8	9	12	12	7	0	60	74	90	269	2	17	296	661	June 30 "
July 28 "	192	186	24	29	14	6	7	10	12	14	4	0	65	52	63	127	1	6	181	300	July 28 "
Aug. 25 "	168	173	36	39	34	29	9	7	12	11	6	0	41	64	62	142	1	6	219	290	Aug. 25 "
Sept. 22 "	184	122	22	24	32	20	8	7	12	9	4	0	62	15	41	111	1	2	112	213	Sept. 22 "
Oct. 20 "	98	85	19	21	35	23	24	19	7	11	3	0	47	78	51	103	—	2	112	203	Oct. 20 "
Nov. 17 "	84	98	21	26	22	18	16	17	12	9	6	0	52	61	45	152	—	4	108	324	Nov. 17 "
Dec. 15 "	126	147	18	14	6	5	9	8	12	11	4	0	54	60	74	266	—	5	199	475	Dec. 15 "
Jan. 12, 1876	112	129	19	16	9	5	7	10	10	8	2	0	53	32	207	303	3	6	331	618	Jan. 12, 1876
Feb. 9 "	127	118	24	18	8	7	7	6	10	12	3	0	74	81	244	197	8	3	638	411	Feb. 9 "
March 8 "	112	121	22	19	9	6	11	8	9	10	5	0	64	67	129	270	1	8	341	504	March 8 "
April 5 "	164	182	24	22	12	6	8	10	13	11	2	0	72	70	99	279	—	7	263	561	April 5 "
Totals.	1949	1952	294	279	209	143	132	126	141	138	61	—	743	761	2037	2738	118	105	4578	5338	Totals.

TABLE VII.

Showing the Death rate per 1,000 living; the annual rate of Mortality per 1,000 living from seven Zymotic Diseases; and the proportion of Deaths from these Diseases to the total Deaths in Kensington and in all London in 1875, and in the ten years, 1865-74.

The Year.	Deaths per 1000 living.		Total Deaths from seven Zymotic diseases, Kensington.	Annual rate of Mortality per 1,000 living from seven Zymotic Diseases.		Proportion of Deaths to 1000 Deaths from seven Zymotic diseases.		The Year.
	Kensington.	London.		Kensington.	London.	Kensington.	London.	
1865	19.0	24.5	319	3.5	4.7	185	196	1865
1866	20.4	26.4	259	2.6	4.8	133	185	1866
1867	19.0	23.0	276	2.7	3.7	142	166	1867
1868	21.0	23.6	457	4.2	4.7	208	200	1868
1869	20.2	24.6	369	3.3	5.5	164	227	1869
1870	21.2	24.1	545	4.6	5.1	222	213	1870
1871	19.1	24.7	542	4.4	6.0	233	242	1871
1872	17.0	21.4	390	3.0	3.8	181	179	1872
1873	18.3	22.5	290	2.1	3.3	119	149	1873
1874	19.5	22.5	388	2.8	3.3	144	147	1874
AVERAGE OF TEN YEARS.	19.4	23.7	383	3.3	4.4	173	190	AVERAGE OF TEN YEARS.
1875	19.4	23.7	372	2.5	3.9	133	164	1875

TABLE VIII.

Comparative Analysis of the Mortality in all London and in Kensington, in 52 weeks, ended
1st January, 1876.

LOCALITY.	Annual Death Rate per 1000 living from all causes.	Annual Death Rate per 1000 living from principal Zymotic diseases.	Per centage of Deaths under 1 year to Births Registered.	PER CENTAGE OF DEATHS TO TOTAL DEATHS.					
				Under 1 year of age.	At 60 years of age and upwards.	From 7 Zymotic diseases.	From Violence.	Registered upon infor- mation of the Coroner (Inquests)	Registered in large Public Institutions.
London ...	23.7	3.9	17.6	24.4	20.8	16.4	3.5	6.8	16.9
Kensington ...	19.4	2.5	15.3	24.6	23	13.3	1.9	5.9	12.1

Showing the Principal Localities in which fatal

Brompton Registration Sub-District.

Locality.		Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	FEVER.			Diarrhoea.	Total.	Locality.
						Typhus.	Enteric.	Simple Continued.			
Brompton Road	...	1	...	...	...	...	...	...	1	2	Absolom Road
Bute Street	...	1	...	...	...	...	...	...	...	1	Abingdon Road
Cathcart Road	...	1	...	...	...	...	...	...	...	1	Adair Road
Chapel Place	...	2	...	...	...	...	...	...	...	2	Admiral Place
Childs Place and Street	...	...	1	1	...	...	...	...	...	2	Aldermaston Street
Coleherne Terrace	...	1	...	...	...	...	...	...	1*	2	Barandon Street
Collingham Place	...	...	1	...	...	...	...	...	...	1	Basing Road
" Road	...	...	1	...	...	...	...	...	...	1	Bevington Road
Eardley Crescent	...	1	...	...	...	...	...	...	...	1	Blechynden Street
Earl's Court Road	...	1	...	3	...	...	...	...	...	4	Blenheim Crescent
Finboro' Road	...	2	...	...	...	...	...	...	...	2	Bolton Road
Fulham Road	...	1	...	1	...	1	...	...	1	4	Bosworth Road
Hollywood Mews	...	...	...	2	...	...	...	...	...	2	Bramley Road
Hooper's Court	...	1	1	...	1	...	...	...	...	3	Buckingham Terrace
Ifield Road	...	3	1	2	...	1	1	...	...	8	Campden Street
Kempsford Gardens	...	...	1	...	...	...	...	...	...	1	Charlotte Terrace
Kramer Mews	...	1	...	...	...	...	...	...	...	1	Chepstow Mews
Montpelier Row	...	2	...	...	...	...	...	...	1	3	" Place
Neville Terrace	...	...	...	...	...	...	1	...	...	1	Clarendon Road
Old Brompton Road	...	2	...	3	...	1	1	1	...	8	Convent Gardens
Onslow Mews	...	1	...	...	...	...	...	...	...	1	Cornwall Road
Princes Mews	...	1	...	...	...	...	...	...	...	1	Crescent Street
Priory Grove	...	...	1	...	...	...	...	...	...	1	Dartmoor Street
Redcliffe Road	...	...	...	...	...	...	1	...	1	2	Edenham Street
Redcliffe Gardens	...	...	1	...	...	...	...	...	...	1	Elsham Road
Relton Mews	...	2	...	...	...	...	...	...	...	2	Fowell Street
Rutland Street	...	1	...	...	...	...	...	...	...	1	Golborne Gardens
Seymour Place	...	1	...	...	...	...	1	...	...	2	" Road
Southwell Gardens	...	1	...	...	...	...	...	...	...	1	" Terrace
Thistle Grove	...	...	...	...	...	...	1	...	...	1	Hazlewood Crescent
Thurloe Place	...	...	...	...	...	...	1	...	...	1	Holland Road
Walgrave Road	...	2	...	...	...	...	...	...	...	2	Johnson Street
Warwick Road	...	1	1	1	4	...	...	...	...	7	Kensington High Street
Yeoman's Row	...	1	1	...	...	...	1	...	1†	4	" Place
											Ladbroke Grove Road
											" Road
											Lorne Gardens

(*) Infantile Cholera.
(†) Choleraic Diarrhoea.

the chief Zymotic Diseases occurred in 1875.

ington Town Registration Sub-District.

	Whooping Cough.	FEVER.			Diarrhoea.	Total.	Locality.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	FEVER.			Diarrhoea.	Total.
		Typhus.	Enteric.	Simple Continued.								Typhus.	Enteric.	Simple Continued.		
..	2	2	Manchester Road	...	1	..	..	..	..	..	1	2
3	4	4	" Street	...	1	..	..	..	..	..	2*	3
2	2	2	Norfolk Terrace	...	..	..	2	..	..	..	1	3
..	2	3	Oxford Gardens	...	..	1	..	..	..	..	..	1
..	..	1	..	..	2	2	Pembroke Square	...	..	1	..	..	..	..	..	1
1	1	2	2	Phillimore Mews	..	1	..	1	..	..	..	..	2
2	2	2	Portland Road	..	1	1	..	..	..	..	4	6
1	1	..	2	2	Portobello Road	..	1	1	3	..	2	1	2	10
2	3	9	Princes Place	..	2	..	..	..	..	..	..	2
..	..	1	1	..	4	4	" Road	..	1	2	..	..	..	..	..	3
..	2	2	Queen's Gate Mews	..	..	..	2	..	1	..	..	3
3	1	4	" " Terrace	..	..	1	..	..	..	..	..	1
1	1	4	Queen's Road	..	1	..	..	..	..	..	..	1
2	1	3	St. Ann's Road	..	..	..	1	..	1	..	1†	3
1	2	3	St. George's Road	..	1	..	1	..	1	..	..	3
1	1	2	St. James' Place	..	2	..	..	..	..	..	..	2
2	2	St. Joseph's House	..	..	..	..	..	..	..	2	2
..	1	1	St. Katherine's Road	..	..	..	..	1	..	7‡	8	8
..	2	3	Silchester Terrace	..	..	..	1	..	..	..	1	2
2	2	2	Silver Street	..	1	..	1	..	..	..	1	3
..	..	1	..	..	3	3	Southam Street	..	2	..	3	..	..	..	4	9
1	1	3	Swinbroke Road	..	1	..	..	..	..	..	3	4
4	1	7	Sylvester Mews	..	1	..	..	..	..	..	1	2
5	6	6	Talbot Grove	..	1	..	..	..	..	..	1	2
..	1	1	Tavistock Crescent	..	1	..	..	..	..	..	..	1
2	7	7	Testerton Street	..	1	..	..	..	..	..	2	3
2	1	3	The Mall	..	..	1	..	..	..	..	1	2
..	1	7	Thorpe Mews	..	..	..	3	..	..	..	1	4
..	..	1	..	..	1	2	Tobin Street	..	..	..	..	..	..	..	2	2
..	2	2	Treverton Street	..	1	..	..	..	..	..	..	1
..	1	1	Uxbridge Street	..	..	1	2	..	..	..	1	4
..	1	1	Walmer Road	..	2	1	1	..	..	..	..	4
..	1	1	Western Terrace	..	..	..	1	..	..	..	1	2
2	1	..	3	3	William Street	..	..	..	4	..	..	..	1	5
..	2	2	Workhouse (The)	..	..	..	2	1	1	..	6	10
..	..	1	..	..	1	1	Wornington Mews	..	1	..	..	..	..	..	..	1
..	2	2	" Road	..	1	..	2	..	1	..	..	4

- (*) Choleraic Diarrhoea.
 (†) Infantile Cholera.
 (‡) Choleraic Diarrhoea.

TABLE X.
PARISH OF ST. MARY ABBOTTS, KENSINGTON.

Return respecting the Vaccination of Children whose Births were Registered during the year 1875.

DATE.	Registration Sub-Districts comprised in Vaccination Officer's District.	Number of Births returned in Birth List Sheets.	Number of these Births duly entered in Columns 10, 11, and 13 of the Vaccination Register (Birth List Sheets) viz.:				Number of these Births which are not entered in the Vaccination Register, on account (as shown by Report Book) of			
			Column 10 Successfully vaccinated.	Column 11.		Column 13. Dead. Un-vac- inated.	Postponement by Medical Certificate.	Removal to District, the Vaccination Officer of which has been duly apprized.	Removal to places unknown, or which cannot be reached, and cases not having been found.	Cases still under proceedings by summons and otherwise.
				In susceptible of Successful Vaccination.	Had Small-pox.					
	1	2	3	4	5	6	8	9	10	
1st January } to 30th June }	Kensington Town ...	1854	1499	8		190	15	6	136	
	Brompton ...	415	344	3		38	4	1	25	
1st July } to 31st Decem. }	Kensington Town ...	1795	1444	10		180	32	7	118	4
	Brompton ...	425	366	1		33	12	2	11	
	TOTAL ...	4489	3653	22		441	63	16	290	4

TABLE XI.**LICENSED SLAUGHTER HOUSES.****SOUTH SANITARY DISTRICT, (12).**

LOCALITY.	LICENSEE.
11, Church Street, Kensington	Mr. Stimpson
11, Peel Place, Silver Street ...	„ Andrews
The Mall, Silver Street ...	„ Wright
121, Brompton Road* ...	„ Cox
183, Ditto ...	„ French
12, New Street, Brompton* ...	„ Lidstone
60, Kensington High Street ...	„ English
Phillimore Mews ...	„ Clayton
15, High Street, Notting Hill	„ Short
133, Ditto ditto	„ Candy
6, Hope Terrace, Notting Hill	„ Beall
35, Earl's Court Road ...	„ Matson
NORTH SANITARY DISTRICT, (21).	
13, Archer Mews ...	Mr. H. Rush
20, Bolton Mews ...	Messrs. Smith and Son
195, Clarendon Road ...	Mr. J. W. Rush
10, Edenham Mews ...	„ Gibson
Tavistock Mews, Portobello Road	„ Hughes
8, Vernon Mews, Portobello Road	„ Young
196, Portobello Road ...	„ Scoles
Ledbury Mews ...	„ French
Lonsdale Mews ...	„ Olney
50, Princes Road, Notting Hill	„ Parratt
98, Ditto ditto ...	„ Roser
10, Princes Mews, Notting Hill	„ Cole
10, Princes Road Mews ditto	„ Coles
Portland Road ditto	„ Colley
41, Princes Place ditto	„ Pickworth
23, Norfolk Terrace ...	„ Matthews
61, Silchester Road ...	„ Matthews
5, James Street, Potteries ...	„ Van
Mary Place, Potteries ...	„ Nind
Royal Crescent Mews ...	„ Macpherson
Ditto ditto ...	„ Down

* These licenses will not be applied for again.

TABLE XII.

LICENSED COW SHEDS.

SOUTH SANITARY DISTRICT. (12.)

LOCALITY.	LICENSEE.
5, Gros'ter Grove East ...	Mrs. Reeves
7, Silver Street ...	Mr. Mackenzie
7, The Mall, Notting Hill ...	„ Edwards
Ditto Ditto ...	„ Draper
Fulham Road(St.Mark'sPlace)	„ Starr
Holland Park Farm ...	Messrs. Tunks & Tisdall
Newland Terrace ...	Mr. Harman
Gore Lane ...	„ Thompson
Earl's Court Road ...	„ Jones
Warwick Road ...	„ Pool
Stratford Road ...	„ Clark
Addison Cottage, Lorne Gar- dens 	„ Lyons

NORTH SANITARY DISTRICT. (15.)

Portobello Road, 191 ...	Mr. D. Hughes
ditto 207 ...	Aylesbury Dairy Company
Ditto (Angola Mews) ...	Mr. Johnson
Wornington Mews ...	„ Jones
Ledbury Mews ...	„ Boon
Notting Barn Farm ...	„ Liddiard
James Street, Potteries ...	„ Arnsby
5, Ditto, ditto ...	„ Van
21, Thomas Street, Potteries...	„ Bidgood
12, Blechynden Mews ...	„ White
14, ditto ...	„ Copperwheat
15, ditto ...	„ Cockman
10, Talbot Mews ...	„ Hornsby
3 & 4, Archer Mews ...	„ Skingle
23, Bramley Road ...	„ Crew

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SPECIAL REPORT
ON THE
ALLEGED CHRONIC PREVALENCE
OF
TYPHOID FEVER
IN
SOUTH KENSINGTON,
BY
T. ORME DUDFIELD, M.D.,

Medical Officer of Health.

PRINTED BY ORDER OF THE VESTRY.

This Report is issued in consequence of a statement made by Sir Henry Cole to the Metropolitan Board of Works to the effect that "Typhoid Fever is chronic in South Kensington," and published in the *Times* and other newspapers, and contradicted by a resolution of the Vestry, founded on the Medical Officer's ordinary monthly report, dated 26th July, 1876, and carried unanimously at a meeting held that day, in the following terms:—

"That the statement made by Sir Henry Cole to the Metropolitan Board of Works, that 'Typhoid Fever is chronic in South Kensington' has no foundation in fact, for no death has occurred from that cause in South Kensington during the present year, and the Medical Officer of Health of the Parish is unacquainted with any cases of illness from the said disease."

Sir Henry Cole replied to this resolution by a letter addressed to the Clerk of the Vestry, as follows:—

"Immediately upon the receipt of the resolution of the Vestry of Kensington dated the 26th of July, which asserted that no death had occurred from typhoid fever in South Kensington during the present year, I communicated with the General Registry Office of Births and Deaths. I found the Vestry had no authority for their statement, and learnt that in the sub-districts of Kensington Town and Brompton, including South Kensington, which is a modern local name without definite boundaries, upwards of 24 deaths from fever had been registered during the 26 weeks ending 1st July, 1876. Of these 16 were certified as 'typhoid,' and this number is independent of deaths from diphtheria and diarrhoea, often connected with sewer gases.

"I beg leave to refer the Vestry to the 'annual summary of the causes of death in London in 1875,' printed and published by the Registrar General, from which the Vestry will see that the deaths in 1875 from typhoid fever were 21 in Kensington and Brompton, so that the usual average death rate from this disease would seem to be increasing.

"I have thus shown that deaths have been occurring without the knowledge of the Vestry or its Medical Officer. My statement that typhoid fever is chronic has foundation in fact. But it cannot be gainsaid that typhoid fever may be chronic, although it may not terminate in death, and it may exist, especially among well-to-do people, although the Medical Officer of Health of the Parish may be unacquainted with any cases of illness from that disease. I may also remark that the proportion in fever epidemics is usually one death in twenty cases.

"I will assume that the Vestry, like myself, will not mind a little trouble in this serious business; so I submit a suggestion which will enable the Vestry to improve the health and comfort of the Kensington inhabitants under their charge. I suggest that with the view of affording to the Medical Officer that knowledge of the existence of 'typhoid' fever which he does not at present possess, and until the law be improved, the Vestry should form a Sanitary Committee of the inhabitants of Kensington, who should report when cases of illness connected with sewer gases occur, and thus enable the Medical Officer of Health and the Parish Surveyor to inquire into the state of the house drains where such cases are reported.

"As the Vestry communicated their resolution to the Metropolitan Board of Works, I request them to have the kindness to forward a copy of this answer to it."

On reading the above letter at a meeting of the Vestry held on the 23rd August, the Medical Officer presented and read a report (subjoined), and the following resolutions were moved by Major-Gen. Boileau, R.E., F.R.S., seconded by Alfred Taylor, Esq., and carried unanimously:—

"That the Report of the Medical Officer of Health now read be received and adopted."

"That the Report of the Medical Officer be printed and a copy thereof forwarded to Sir Henry Cole, the Metropolitan Board of Works, the Society of Arts, the several London and local newspapers, and to each member of the Vestry."

"That the Vestry entirely concur in the course taken by the Medical Officer of Health in this matter, and approve of the letter addressed by him to the Editor of the *Times*, and inserted in that newspaper on the 18th day of August instant; and consider the zeal and energy displayed by the Medical Officer in regard to all sanitary matters affecting the parish, deserving of the highest commendation."

"That Sir Henry Cole be requested to specify the particular places in South Kensington where 'Typhoid Fever is chronic;' and that the Society of Arts be requested to insert in their journal Dr. Dudfield's letter, which appeared in the *Times* on the 18th instant."

By order of the Vestry,

GEO. CAPPER HARDING,

VESTRY HALL, KENSINGTON.
August 23rd, 1876.

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ADDENDUM.

In accordance with the direction of the Vestry, expressed in the resolutions at foot of page 4, the subjoined letter was addressed to Sir Henry Cole, asking him to "specify the particular houses or streets in which Typhoid fever is chronic in South Kensington." Sir Henry Cole, in his reply subjoined, "declined for reasons which must be obvious," to furnish the desired information.

VESTRY HALL, KENSINGTON.
Sept. 25th, 1876.

"THE VESTRY OF THE PARISH OF SAINT MARY ABBOTTS, KENSINGTON,
" VESTRY HALL, KENSINGTON, W.,

Copy.]

"18th September, 1876.

(CLERK'S DEPARTMENT.)

"SIR,

"I have the honour, by direction of the Vestry of Kensington, to forward to you the enclosed copy of a Report by Dr. Dudfield, Medical Officer of Health for Kensington, on the subject of the alleged prevalence of Typhoid Fever in this parish. At the same time, the Vestry desire me to state that they are anxious to possess every possible information relative to disease in any part of Kensington, and will thank you to be so good as to specify the particular houses or streets in which Typhoid Fever is chronic in South Kensington.

"I am, Sir,

"Your obedient Servant,

(Signed) "GEO. C. HARDING,

"SIR HENRY COLE, K.C.B.,

"Clerk of the Vestry.

"33, Thurloe Square, S.W."

Copy.]

"ABBAY HILL, KENILWORTH,

"22nd September, 1876.

"SIR,

"I have received your letter of 18th inst., together with the Report by Dr. Dudfield, on the subject of Typhoid in South Kensington, and I have sent them to the Committee on Health at the Society of Arts, for answer if it appears necessary.

"I take the liberty of adding my opinion that an inspection of such plans in possession of the Vestry will enable the Vestry to infer where house drains are imperfect, unconnected, or not properly connected with the sewers, and where accordingly Typhoid may be expected to recur. Moreover, I think the anxiety which the Vestry expresses, to possess every possible information relative to disease in any part of Kensington will be satisfactorily met, by its performing the duty of obtaining this information, by careful and systematic survey, through an adequate staff of surveyors. For this and other reasons which must be obvious. I must decline to specify particular houses or streets where outbreaks of Typhoid have occurred or are likely to occur.

"I am, Sir,

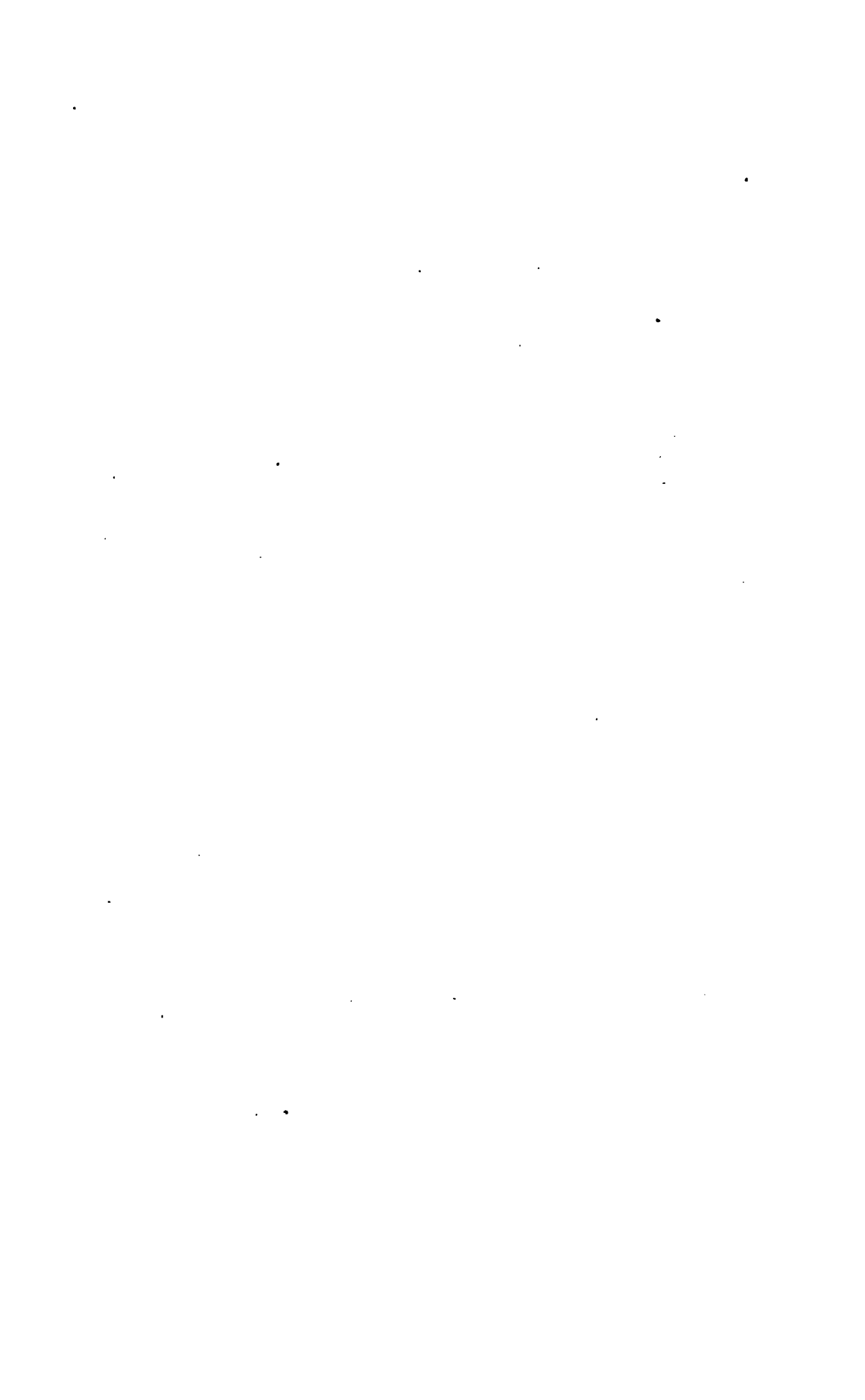
"G. C. HARDING, Esq.,

"Your obedient Servant,

"Clerk of the Vestry."

(Signed)

"HENRY COLE.



DEPARTMENT OF MEDICAL OFFICER OF HEALTH,
VESTRY HALL, KENSINGTON.

August 23rd, 1876.

GENTLEMEN,

Although I have in another place* shewn the inaccuracy of Sir Henry Cole's statements, I beg now to submit some further remarks on his letter just read, and which was published in the *Times* and the *Standard*, on Monday the 14th inst.

Sir Henry Cole's first assertion that "Typhoid Fever is chronic in South Kensington" having been effectually disproved, he has shifted his ground, and in reply to your Vestry's statement that "no death has occurred from that disease in South Kensington during the present year," he now declares that there is no authority for the said statement, because in "the sub-districts of Kensington Town and Brompton, including South Kensington, upwards of 24 deaths from 'fever' of which 16 were certified as 'typhoid,' were registered in the 26 weeks, ended July 1, 1876." On this I shall first remark (Sir Henry Cole does not appear to be aware of the fact) that the two registration sub-districts named comprise the entire parish of Kensington, extending from Kensal Green in the North, to the Fulham Road in the South;—an area of 2,190 acres, with an estimated population of 150,000: and, secondly, that Sir Henry Cole's original assertion with which your Vestry were solely concerned at the previous meeting, applying to South Kensington only, it is no answer to your Vestry's resolution to say that deaths from "fever" have occurred in parts of the parish other than South Kensington. Sir Henry Cole's argument might be, not unfairly, expressed thus:—"Deaths from 'fever' have occurred in the parish; South Kensington is 'included' in the parish, therefore deaths from fever have occurred in South Kensington;"—and your Vestry, in denying the fact, are misleading the public.

Sir Henry Cole's facts however are as defective as his logic, for only 19 (or, rather, as I shall show in an appendix, 17) deaths

* Letter to the editor of the *Times*, published in that paper August 18th.

from "fever," and not "upwards of 24," were registered in the 33 weeks, ended on the 19th inst.; and of these, 13 (not 16), were returned by the Registrar-General as deaths from typhoid fever, three of them however being medically certified as "remittent fever" and one as "bilious fever." A list of these cases is given in the appendix. Only one of them, as already stated, was registered in the Brompton sub-district, viz: in Yeoman's Row, which Sir Henry Cole will hardly claim as a part of South Kensington.* The facts relating to these deaths show that they were independent of one another, had no community of origin and no connection in point of time or locality. Eight of the deceased were children under five years of age, other 6 were between 5 and 16 years old. Five were adults. Nearly all of them belonged to the labouring classes and to the lower grades of commercial life.

Sir Henry Cole quotes the Registrar-General's annual summary of deaths to show, what your Vestry already knew, that "the deaths in 1875 from typhoid fever were 21 in Kensington (Town) and Brompton," and to prove, what is not correct, that "the death rate from this disease is increasing;" and he maintains that he has thus "shown that deaths have been occurring without the knowledge of the Vestry or its medical officer." It is quite true that 21 deaths from typhoid fever were registered in this great parish last year: but it is also true that the death rate from this cause in Kensington was considerably below the average rate in all London, being only 1·4 to 10,000 persons living, the rate in all London, being 2·4 per 10,000. The difference in favour of the parish may be stated in another way. The deaths from

* Since this report was read, a fatal case of "typhoid" fever has occurred in the Brompton sub-district, and in a street, "Finborough Road," which possibly may be deemed by some to be in "South Kensington." The medical man who attended the case informed me that "the disease did not originate in Kensington, but in the patient's place of business. He had complained that the drains there were very bad."——My correspondent adds that in "his own practice, both private and hospital, typhoid is one of the rarest diseases in Kensington." The cases he has seen, "with one or two exceptions, have been traceable to infection outside the district, though, of course, when the patients became ill, they have been put down as Kensington cases." Another case investigated in the north of the parish gave similar results, the medical man in attendance writing, "it is most likely that in this case the fever did not originate in Kensington." Enquiry into the origin of the only additional fatal case since the date of the report gave negative results.

typhoid fever were equivalent to 7·5 in every 1000 deaths in the parish, and to 10·3 in the Metropolis as a whole. Moreover as only 13 (or rather, as I shall show in a table in the appendix, 11) deaths from typhoid fever have occurred in the 33 weeks of the current registration year, it must be obvious that the figures brought forward by Sir Henry Cole do not prove that "the death rate from this cause is increasing"—even as regards the whole parish, while the fact remains that not one death from "fever" has occurred in South Kensington. Again, as all the deaths referred to were duly reported by me to your Vestry, Sir Henry Cole's further statement that "deaths have been occurring without the knowledge of the Vestry or its Medical Officer" is shown to be without foundation.

Sir Henry Cole, however, still asserts that his "statement that typhoid fever is chronic, (i.e., in South Kensington) has foundation in fact:" and he adds that "disease may be chronic, although it may not terminate in death; and may exist, especially among well-to-do people, although the Medical Officer of Health may be unacquainted with any cases of illness from that disease." Now, I am quite prepared to admit that cases of typhoid fever may exist in the upper classes without my knowledge; but not from want of effort on my part to obtain information, your Vestry having on two occasions sanctioned the issue of an appeal to medical practitioners with the object of getting knowledge of the occurrence of infectious diseases. The cases, however, if there are any (and Sir Henry Cole gives no proofs!), cannot be numerous in South Kensington; for, as before stated, there have been no deaths, and the deaths from this disease average one in six cases—not one in twenty, as Sir Henry Cole states. Through the courtesy and the co-operation of the Guardians and the Dispensary Committees we obtain immediate information respecting cases of "fever" in poor law and charitable medical practice (there are no such cases at present); but even though Sir Henry Cole should succeed in organising his proposed "sanitary committee of the inhabitants," I am not sanguine of getting much information respecting the occurrence of infectious diseases

among the "well-to-do" classes without a legislative enactment to compel the disclosure of such cases to the sanitary authority, a measure I have often urged as necessary, with the full concurrence of your Vestry.

As regards fatal cases of infectious disease it may not be out of place to remark that your Vestry were the first in London to take measures to obtain immediate information of deaths by entering into a special arrangement with the sub-district registrars of deaths for that purpose, and during the last six years every such case has been reported to me within a few hours after registration of death.

As it has been attempted to affix a stigma of special unhealthiness on one of the most salubrious spots in the Metropolis, South Kensington, and on the parish generally, perhaps I may be permitted to observe here that whereas the death rate in all London last year was 22.5 per 1,000 persons living, the rate in the parish was 19.4 per 1,000 (or 18.5, after deducting the deaths of non-parishioners in the Consumption Hospital) while the rate in the Brompton registration sub-district, including South Kensington, was only 16.6 per 1,000.

I might have finished my report at this point but that certain comments to which Sir Henry Cole's original statement gave rise, and to which the public would naturally attach much greater weight, appear to call for notice. It has been said that "the zymotic death rate of the South Kensington district is steadily increasing, and that a death rate from zymotic diseases of more than 2 per 1,000 persons living is absurdly high for such a suburb as South Kensington."* To this I would reply that the zymotic death rate quoted is not that of "South Kensington," but of the Brompton registration sub-district; and that in order to form a just notion of the proper or usual zymotic death rate of any district it is necessary to take into the calculation a sufficient number of years. The reason is obvious, and is so well expressed by a recent writer that I cannot do better than quote his words: "In attaching importance to an increased death rate from zymotic diseases during any period reference must be made to prior con-

* *The Lancet*, Aug. 12, p. 266.

ditions. A prolonged immunity from measles, whooping-cough, or scarlet fever is sooner or later certain to be compensated by an increase proportionately great because during the years of immunity the population susceptible to such diseases has continued to increase.* This fact should have been borne in mind in considering the present case; for though it is true that the zymotic death rate was higher last year, and is higher this year than in the year 1874 (with which the comparison is made to the disadvantage of the district) this higher rate, which is still not above the decennial rate, "has," to again quote the same writer, "been caused rather by an increase of population susceptible from prior immunity than" (as assumed) "from insanitary conditions."

The death rate from the seven principal diseases of the zymotic class per 1,000 persons living in the Brompton district during the last ten years was as follows:—

1865	1866	1867	1868	1869	1870	1871	1872	1873	1874
3.0	1.6	2.2	3.1	2.6	3.9	2.2	2.2	1.6	1.6

or an average of 2.4 per 1,000.

The death rate in 1875 was an average one of 2.4 per 1000, and the rate in 1876 (thus far) is 2.5 per 1000, or .1 above the average, though far below the maximum (3.9.) But if we take the twelve years, 1865-76, and divide them into two equal periods (the second of which corresponds to my tenure of office,) it appears that the zymotic death rate in the first period of six years was 2.73 per 1,000, and in the latter six years 2.08 per 1,000, a very substantial decrease. The error in the statement that "the zymotic death rate of the South Kensington district is "steadily increasing," has arisen from comparing the mortality in average years (1875-6) with that of an exceptionally low year (1874).

But it has also been said that the zymotic death rate is too high for such a suburb as South Kensington, and I do not very well know how to meet this statement otherwise than by a com-

* The *Lancet*, Aug. 12, p. 258.

parison that may appear invidious: but having calculated the death-rate in 1875, from zymotic diseases, in the Brompton sub-district and the entire parish, and in all the other parishes forming the Registrar-General's "West districts of London," and having compared these with one another, and with the Metropolitan rate, I do not think the writer's views are borne out, but I will let the figures speak for themselves.

Death-rate from seven principal zymotic diseases, 1875:—

Parish of Paddington	...	...	...	2·8	per 1,000
Parishes of Fulham and Hammersmith	5·2			„	
Parish of Chelsea	...	...	...	4·2	„
„ St. George, Hanover Square...	2·4			„	
Parishes of St. Margaret and St. John, Westminster	...	...	...	4·7	„
Westminster Union	...	...	...	2·8	„
Parish of Kensington	...	...	...	2·5	„
Brompton sub-district	...	...	...	2·4	„
All London	...	...	...	3·9	„

I do not wish to attach too great importance to the above figures (and I have already entered a protest against deductions drawn from insufficient data), but I think they may be taken with others to show that South Kensington is not open to the reproach levelled against it.

Before concluding, it may not be out of place to observe that Sir Henry Cole, in his part of the controversy, assumes that sewer gas from defective drainage, is the only cause of typhoid fever. I believe that a much more fruitful source of sewer gas poisoning is the absence of ventilation in well-laid drains. The prevalent custom, moreover, of connecting water cisterns with sewers, through the medium of waste-pipes, so-called; and the dirty and neglected state into which cisterns are allowed to fall, often because they are so placed as to be practically inaccessible, are dangerous nuisances. To these and other matters of public interest I have been permitted to draw the attention of parishioners, by a special notice, a copy of which was left, some time ago, at every house. I am afraid that such attempts to educate the public are not attended with much success, but they are none the less a public duty.

Leaseholders and owners of property in a locality like South Kensington might make themselves tolerably secure against the evils mentioned, and at a small expense. Perhaps the generally healthy character of the locality induces apathy: for it must be confessed that very few of the deaths from zymotic diseases registered in "Brompton" belong to "South Kensington." It has, however, fallen to my lot to investigate fatal cases of typhoid fever in South Kensington, and I have on several occasions obtained irrefragable proof that the disease had been contracted during absence from home, and developed shortly after return from the country, from watering places and even from abroad.* In other cases described as "typhoid fever" in the Registrar-General's weekly returns, I have good grounds for the belief that error has arisen from the loose use of the adjective "typhoid" which is too commonly employed to express a set of symptoms rather than the specific disease known as "enteric fever"—as when towards the close of a lingering illness, *e.g.*, pneumonia, the case is said to have assumed a "typhoid" form which does not imply that the patient had "*enteric fever*."

I must apologize for troubling your Vestry with so lengthily a report in answer to charges so entirely unfounded, and in support of which not one reliable fact has been advanced; but as I know Sir Henry Cole's statements have caused a good deal of unnecessary alarm, I thought it my duty to do so.

I may add that on publication of my reply in the *Times* to Sir Henry Cole's letter, I forwarded to him documentary proofs of the statements I had made in refuting his assertions. Sir Henry Cole has not ventured to challenge my reply; but he has acknowledged my communication without, however, one single word of regret, for a series of mis-statements, calculated to injure a most salubrious locality, and equally unjust to your Vestry and to myself.

I am, Gentlemen,

Your obedient Servant,

T. ORME DUDFIELD, M.D.,
Medical Officer of Health.

To the Vestry of Kensington.

* See foot-note on page 6.

Deaths from the seven principal Zymotic Diseases in the Brompton registration sub-district—1865-76.

The Year.	Small pox	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Typhus Fever.	Typhoid Fever.	Simple continued Diarrhoea Fever.	Total Deaths.	Deaths per 1,000 living.
1865	1	13	11	—	1	—	18†	—	68	3.0
1866	1	6	5	—	11	—	2	—	39	1.6
1867	11	2	6	—	13	—	9	—	56	2.2
1868	1	8	33	*7	5	—	8	—	80	3.1
1869	4	2	22	1	7	—	15	—	71	2.6
1870	1	11	45	5	10	2	9	3	109	3.9
1871	9	4	7	2	7	2	8	2	64	2.2
1872	1	15	7	2	8	—	8	—	67	2.2
1873	—	10	2	3	7	—	8	—	54	1.6
1874	—	6	4	2	9	—	9	4	56	1.6
1875	—	11	25	8	20	—	9	2	87	2.4
1876	—	16	14	4	9	—	1	—	94	2.5
									per ann.	

* First year of separate registration (1868).

† Registered generally as "Fever" until the year 1870.

Deaths from "Fever" in 1875—Brompton sub-district.

Date.	Sex.	Age.	Description.	Terms of Certificate.	Place of Death.	Remarks.
Jan. 14	M.	44	Carman.	Fever, Hemorrhage, Exhaustion.	Ifield Road.	Classed as simple continued fever.
Mch. 15	M.	29	Butler.	Pneumonia of right lung with typhoid fever, 15 ds.	Richmond Road.	
June 2	M.	77	Gentleman.	Typhoid fever, Congestion of the lungs.	Thistle Grove.	
June 4	M.	59	Gentleman.	Typhoid, 4 weeks, Pneumonia, Exhaustion.	Redcliffe Road.	
June 13	F.	59	Wife of a Painter.	Typhoid fever, Pleuro-pneumonia.	Yeoman's Row.	
June 16	F.	23	Domestic Servant.*	Enteric fever, Congestion of the lungs.	Consumption hospital.	Classed as simple continued fever.
July 28	M.	71	Gentleman.	Typhoid fever.	Seymour Place, Fulham Road.	
Sept. 19	F.	27	Gentleman.	Typhoid fever, 20 ds, Perforation of bowel, 24 hrs	Thurloe Place.	
Dec. 3	F.	47	Wife of a Labourer.	Typhoid fever, 14 days, Congestion of lungs.	Ifield Road.	
Dec. 5	F.	18	Wife of an Ironmonger.	Gastric fever, 10 days.	Clairville Grove.	

* An out-patient at the hospital, from Penge, admitted because found to be suffering from typhoid fever.



THE ANNUAL REPORT
ON
THE HEALTH,
SANITARY CONDITION,
&c., &c.,
OF THE
Parish of St. Mary Abbots,
KENSINGTON,
FOR THE YEAR
1876.

BY
T. ORME DUDFIELD, M.D.,
(Vice-President of the Society of Medical Officers of Health, etc.,)
MEDICAL OFFICER OF HEALTH.

KENSINGTON:
J. WAKEHAM, PRINTER, 4, BEDFORD TERRACE, CHURCH STREET.
1877.

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TWENTY-FIRST ANNUAL REPORT
OF THE
MEDICAL OFFICER OF HEALTH,
Being for the Year 1876.

To the Vestry of the Parish of St. Mary Abbotts, Kensington.

GENTLEMEN,

I propose in the present report, as on former occasions, to place before your Vestry the vital statistics for the registration year, which in 1876 terminated on the 30th December. The ordinary sanitary statistics will be compiled as usual for the 52 weeks ended 25th March, 1877, the close of the Vestry year. Other subjects of interest will be dealt with as occasion may seem to require.

The year 1876, judged by the rate of mortality, may be considered an average year in a sanitary point of view. The deaths, including those of non-parishioners in public institutions, were 2,896, an increase of 110 upon the number registered in 1875, as the number registered in 1875 was an increase of 90 upon the number registered in 1874. But as the population increases rapidly year by year, so necessarily must the gross number of deaths. Between July, 1874, and the same period of 1875, the estimated increase in population was 5,500; and to the middle of 1876 a further estimated increase of 4,500 occurred, raising the total to 148,000. The deaths registered (2,896) were equivalent to 19.5 per 1,000 living, exactly the decennial average rate; but if the deaths of non-parishioners in the Brompton Hospital for Consumption and Diseases of the Chest (109), and the deaths that took place at St. Joseph's House, Notting Hill (36), be deducted, the rate falls to 18.6 per 1,000. A certain number of parishioners, however, die away from their homes, and it seems only fair, therefore, in comparing the parochial with the Metropolitan rate of mortality, to allow for these deaths, and hence, in all the statistics that follow, the death of non-parishioners within the parish, will be retained as a compensatory allowance for the deaths of parishioners beyond the limits of the parish. Calculating the death-rate in Kensington, then, at 19.5 per 1,000, it will be seen by the subjoined statement that the parish still retains its favourable position:—

	Death-rate	1876.	1875.	1874.	1873.
Kensington ...	19.5	19.4	19.5	18.3	per 1,000
London ...	22.3	23.7	22.5	22.5	"
West Districts	21.0	22.1	20.9	20.5	"
North ...	21.4	22.3	21.8	21.2	"
Central ...	24.0	26.0	25.6	25.0	"
East ...	24.0	25.5	25.4	25.2	"
South ...	22.1	24.0	21.5	22.0	"

It must be admitted, however, that while in 1876 the rate of mortality in the Metropolis as a whole, and in the several groups of districts, exhibits a decline as compared with that of the preceding year, the rate in Kensington was stationary, and this was due to the prevalence of certain infantile diseases of the zymotic class, viz., measles, whooping cough, and diarrhoea, the deaths from these diseases in 1876 having exceeded the number registered in 1875 by one hundred and forty-one; thus accounting, moreover, for the increase in the number of deaths from the seven principal zymotic diseases, from 372 in 1875 to 498 in 1876. The death-rate from these diseases, nevertheless (3.3 per 1,000 persons living), was only .1 per 1,000 above the decennial average (3.2.)

REGISTRATION SUB-DISTRICTS.—"Kensington" * parish is divided for registration purposes into two sub-districts of unequal size, the northern and largest of which, "Kensington Town," comprises an area of 1,497 acres, and an estimated population at the middle of the year of 110,000. The "Brompton" sub-district has an area of 639 acres, and an estimated population of 38,000. A considerable portion of the parish is still open ground; but building operations are proceeding rapidly, though not during the past year at the extraordinary rate of the immediately preceding years. Thus the new houses brought into rating in the year ended July, 1876, were only 504 as against 777 in the preceding year.

The Brompton sub-district, however, has become the centre of greatest building activity, and the houses erected in South Kensington, Earl's Court, &c., are large and of a superior character, mainly designed for the well-to-do classes.

* "Kensington" is the title of a registration district, which includes the parishes of Paddington, Fulham, and Hammersmith. The subjoined figures show the relative proportions of Kensington parish, and the other parishes comprised in the registration district of Kensington:—

	Area in statute acres.	Inhabited houses, 1871.	Population, 1871.
Kensington ...	2,190	15,785	120,299
Paddington ...	1,251	11,847	96,813
Hammersmith	2,287	6,719	42,691
Fulham ...	1,716	8,469	38,350

For some parochial purposes it may be added that Kensington parish is divided into wards. The subjoined figures show the acreage of the several wards, and other particulars of interest.

Name of Ward.	Area in statute acres.	Inhabited houses, 1871.	Population, 1871.	Rateable annual value of property, 1871.
Holy Trinity, } Brompton ... }	... 439	8,224	22,128	£246,716
St. John, Notting Hill, and St. James, } Norland ... }	905	7,730	62,475	£365,012
St. Mary Abbots ...	846	4,781	35,696	£323,992
	<u>2,190</u>	<u>15,785</u>	<u>120,299</u>	<u>£985,720</u>

The two sub-districts differ widely in respect of the social status of their inhabitants. Speaking generally the rich and well-to-do form a large proportion of the population in "Brompton," the "poor" being few in number; while the Town sub-district contains a large preponderance of the poorer classes. And though the constant decrease in out-door relief, which is set out in the published reports of the proceedings of the Board of Guardians might seem to point to a different conclusion, I believe that the poor inhabitants are increasing in number in the northern parts of the parish. The poor in Kensington, however, have one advantage over the poor in some other parts of the Metropolis, especially in the East end, viz., that they live in houses obviously intended for a superior class of people: miles of streets of such houses being now inhabited by a class of persons who, in the older parts of the Metropolis, find shelter in dwellings that by comparison might be described as squalid. Rents are high, as might be expected, and there is a good deal of overcrowding, which leads me to anticipate the probability that ere long, unless a remedy is provided, of which I do not see any present prospect, the Kensington rate of mortality will approximate more nearly to the Metropolitan rate than hitherto.

It is difficult to estimate with precision the relative population of registration sub-districts at *inter-census* periods; but from a careful consideration of the number of inhabited dwellings, &c., I am disposed to believe that the estimate of 38,000 as the population of Brompton in July, 1876, is very near the mark, and that in the previous year I was rather below the mark in fixing it at 35,250. Assuming the correctness of this estimate, the following figures show how widely the sub-districts differ in respect of their vital statistics. Deducting the deaths of non-parishioners at the Consumption Hospital, and adding a fair proportion of the deaths in the parish infirmary to those registered in Brompton, it would appear that the rate of mortality in the latter district was only 14.9 per 1,000 persons living, while the rate in the "Town" sub-district was 20.2 per 1,000. An equally striking difference is apparent in the sex death-rate. The census of 1871 revealed the fact of a great disproportion in the relative numbers of the sexes, and assuming a continuance of the same ratio it would appear that the excess of female population was 27,500 in July, 1876, and that the death-rate in females was only 16 per 1,000 the males-rate being 24.6. In an estimated male population of 60,250 there were 1487 deaths, while the deaths in the female population of 87,750 were only 1,409. It need hardly be stated that these remarkable facts of excessive female population and low female death-rate have an influence on the sanitary statistics of a very pervading character, and constitute a warning to us not to rely on a low gross death-rate as an infallible evidence of salubrity.

The birth-rate in Kensington is low by comparison with that of London. Last year it was 32.9 per 1,000 (London 36.5.) In this respect again, we have evidence of a material difference between the sub-districts in the character of their population. The rich Brompton district with, no doubt, a larger excess of females, including domestic servants, had a birth-rate of only 21.9 per 1,000, while in the Town sub-district, with its larger proportion of poor people—a fecund race, the birth-rate was 33.3 per 1,000.

Having said so much in illustration of the differences that prevail and distinguish the two sub-districts—differences that make sanitary work easy in the South, and so arduous in the north, I propose, before passing to the detailed subjects of the annual report, to submit some observations on the mortality, &c., from the

ZYMOTIC DISEASES.

The year 1876 was chiefly characterised, so far at least as Kensington is concerned, by the somewhat extensive prevalence of certain of these diseases.

MEASLES was very prevalent and very fatal. It caused 128 deaths, 103 of which were registered in the first half of the year. The corrected decennial average number of deaths from this disease is 65. It is to be feared that parents, the poor especially, under-rate the importance of measles, and the same remark applies with at least equal force to the other specially infantile diseases—whooping-cough and diarrhoea. It is a well-known fact that the great majority of the deaths from these diseases occur among the poor, and though in respect of measles and whooping-cough the influence of infection is necessarily more intense where the overcrowding is greatest, it must be apparent that if the same care were taken of their children by the poor as among the rich (though it is generally impossible), the class-mortality from the same diseases would not present such extreme differences. The deaths from uncomplicated measles are few by comparison. Out of 103 deaths registered in the first half of the year, only 12 were so returned; while 52 were attributed to complications affecting the breathing organs alone. The deaths were spread over a large area in the North. As usual Brompton enjoyed a comparative immunity, the deaths in that sub-district numbering 16 as against 112 in the "Town" sub-district.

SMALL-POX.—Towards the close of the year, small-pox became epidemic in London. The disease had been in remarkable abeyance since the close of the great epidemic of 1871-2. In Kensington not one death from this cause was registered between January, 1873, and February, 1876. In the latter year, however, 8 deaths

were registered, all in the "Town" sub-district; and the malady, which assumed serious proportions towards the close of the year, is at the present time (June) prevailing with almost undiminished force. In my last report I narrated some striking fatal cases, the nature of which had unfortunately been mistaken at the first. It is impossible to say to what an extent the spread of the disease may be attributed to such oversight, and to the concealment of non-fatal cases, owing to the want of a national registration of disease? But, by way of comparison, to take a disease in the lower animals, cattle plague, which has lately excited much alarm throughout the country, does anybody doubt the large proportions this virulent infectious disease would have attained if the earlier cases had been overlooked or concealed? or can anyone doubt the success of the "stamping-out" process, by which it was so speedily eradicated? We cannot, of course, "stamp-out" disease in man by the process applied in cattle disease: but if the law required the disclosure of every case of infectious disease, and if we had the same power to deal stringently with infected people and infected houses in order to prevent the spread of an epidemic, that the Inspectors of the Privy Council enjoy in dealing with cattle and cowsheds in epizootics, I, for one, entertain no doubt that a disease like small-pox would rarely if ever attain the proportions of a serious epidemic. Our powers are very limited indeed, though we must thankfully admit the advantages conferred on the Metropolis through the establishment of hospitals by the Metropolitan Asylums Board, under the Metropolitan Poor Act of 1867. Speaking generally these hospitals have been as freely open to receive the sick whom we desired to send into them as though they had been under our control;—not of right, but of grace. The Poor Law Guardians might have declined taking many of the sick on the ground of their not being paupers, strictly so called; although they became so by the mere fact of receiving such (nearly always) gratuitous relief. But they did not do so, and the "Managers" received all comers without question. I speak of course with reference to Kensington cases. What has happened in other parts of London I am not in a position to state, but I have reason to believe that in some districts there has been some friction in the relations between Poor Law and Sanitary Authorities. The possibility of any such friction should be at once removed; for while conceding the generally satisfactory working of the dual system, in Kensington, it must be admitted that its success is entirely dependent on the existence of good feeling between the authorities; and on the intelligent appreciation by the Board of Guardians of the necessities of the position. Boards of Guardians, if they thought fit to do so, might at any moment practically close the asylum doors against a large proportion of the infected sick on the plea that they are not paupers. The Local Govern-

ment Board could only offer advice. The weight of public opinion might control the action of Guardians: but nothing short of legislation could set matters right in such an assumed difficulty. While therefore cordially acknowledging the generally satisfactory working of the present system, I cannot too strongly advocate a change that shall either place the hospitals under the charge of the local Sanitary Authorities (*i.e.* the Vestries and District Boards of Works) in some shape or other; or, at the least, give the Sanitary Authorities the absolute right of sending to the hospitals (on payment) any cases they may deem it necessary to isolate away from home. This question of

HOSPITAL ACCOMMODATION FOR THE NON-PAUPER INFECTIOUS SICK

has of late been raised and discussed in a spirit which seems to hold out a prospect of an early and a satisfactory settlement. It is so important that I offer no apology for putting a brief resumé of facts on record, the more particularly as there is now a pretty general consensus of opinion in favour of views I have all along advocated, of the necessity of making provision for isolating in hospitals all proper cases, and of placing hospital relief on the same footing as vaccination, *i.e.*, by depauperising it.

In January of the present year the epidemic showing no signs of abatement, and the new hospitals of the Managers at Fulham and Deptford being not nearly ready for occupation, the Local Government Board addressed a communication to the several sanitary authorities, in which they said "looking to the present crowded state of the hospitals: to the extension of the disease in the Metropolis, and to the proportions the epidemic is likely to assume," the Vestries, &c, should provide hospital accommodation for "that large class of persons not needing relief, but whose isolation in hospitals is necessary for preventing the spread of the disease." They stated "that the hospitals provided for the reception of cases of small pox by the Metropolitan Asylums Board were essentially intended to meet the requirements of the destitute class, and that the admission into these hospitals of persons not in need of poor relief was altogether exceptional, and only allowable upon condition—(1) that the individual case is one of urgency, and (2) that there is sufficient accommodation for the patient without infringing upon the space required for paupers." The Board expressed their fear, which the event has not justified, that the accommodation at the disposal of the Asylums Board would not exceed the amount required for this class, and they requested to be informed what provision your Vestry had made, or proposed to make, for the non-pauper class of the sick poor under section 37 of the Sanitary Act, 1866?

This question of hospital accommodation for non-pauper sick

had been raised some months previously in a correspondence between the Clerk to the Guardians and myself, which was submitted to your Vestry in my report (No. 12, 1876) dated 28th November. In August, 1876, the Guardians having acceded to our request for their active co-operation, informed the Local Government Board that they had instructed their Relieving Officers "to furnish orders for the admission into Poor Law hospitals of any persons whom the sanitary authorities recommend for removal and admission there,"* and they desired the opinion of the Board on the legality of the course they had adopted. The Board in their reply dated 6th September, directed the attention of the Guardians to section 42 of the "Poor Law Amendment Act, 1876,"† "under which" the Board stated that, "the class of cases referred to by the Guardians," (i.e., poor persons not being paupers), "is provided for;" and "the Guardians therefore need not intervene in the matter."

Any hope we might have entertained that the power we had so long sought of being able to send our poor (non-pauper) sick to the hospitals under the misty and vacillating section of the Act referred to by the Board, and which has never yet been put into operation, was quickly dispelled by the publication of a circular letter from the Clerk to the Managers of the Asylums Board, addressed to the Clerks of Boards of Guardians as follows:—

"The Metropolitan Asylum Board,
37, Norfolk Street, Strand, London,
October 24th, 1876.

Dear Sir,

The attention of the managers having been drawn to the Divided Parishes and the Poor Law Amendment Act, 1876, and some misapprehension appearing to have arisen in reference to the meaning of section 42, I am directed to remind you that the hospitals of the Managers are intended for the reception only of paupers chargeable to the parishes and unions in the Metropolis. I am directed at the same time to state that the medical superintendents of the hospitals would only be justified in admitting any person not a pauper, if they should be satisfied that a refusal to admit such person might be attended with dangerous results.

I am, dear Sir,

Yours faithfully,

W. F. JEBB, Clerk."

* Letter from the Clerk to the Guardians to the Local Government Board, 12th August, 1876.

† The section reads as follows:—"If the Managers of a district constituted under the provisions of the Metropolitan Poor Acts shall have admitted any sick person into their asylum not being a pauper, but under circumstances of urgency, they shall have and may exercise the like powers over such person, and shall have the like remedies for the recovery of all reasonable charges incurred on behalf of any such person as are conferred by the Poor Law Acts upon Guardians over paupers, and for the recovery of relief given or deemed to be given by way of loan to such pauper.

"But the said powers and remedies shall not be exercised or put in force by the Managers until they shall have been authorised to do so by the Local Government Board, and shall be exercised subject to any restriction which may be imposed from time to time by the Board.

"Provided also, that no sum shall be recoverable by Managers under the provisions of this Act in respect of any expenses incurred by them other than those which shall be the subject of a separate charge in respect of an inmate to any union or parish in the district."

The Local Government Board appear by their letter dated Jan. 2, quoted above, to have acquiesced in the views of the Managers, thus practically withdrawing the opinion expressed in their letter to the Guardians (Sept. 6, 1876) that the 42nd section of the Poor Law Amendment Act, 1876, provided for the non-pauper sick.

We were thus left pretty much in the same position as when in 1875 I addressed a letter to the Local Government Board with a view to ascertain whether we might not arrange with the Managers for the admission into the Asylums of certain cases of non-pauper sick at the cost of the Nuisance Authority—and without the intervention of the Poor Law Officials? I was especially desirous that the time of the District Medical Officer should not be needlessly occupied, and that the certificate of any duly registered medical practitioner should be accepted as evidence of the nature of the infectious disease—a plan that would often save valuable time, and prevent delay in the removal of the sick. The special enquiries I addressed to the Board were—(1) “Whether it was absolutely necessary that the Poor Law Medical Officer should sign the medical certificate required to enable the removal of fever and small pox cases to the Poor Law Hospitals? and (2) whether a patient could be admitted into the said hospitals at the expense of the Sanitary Authority under section 26 of the Sanitary Act, 1866?” The Board’s reply did not specifically state that we could not make an arrangement with the Managers for the admission of non-paupers; but this was its real purport, for they stated in effect that the only modes in which persons can properly obtain admission into the hospitals were by an order signed by the Relieving Officer or the Master of the workhouse, and upon a certificate of a District or Workhouse Medical Officer; in other words as a pauper. And so it has continued up to this hour, for the halting provisions of the 42nd section of the Poor Law Amendment Act, 1876, have not been carried into effect by the required order of the Board, so that with few exceptions, for which we are indebted to the courage of certain Medical Officers of Health in sending cases to the hospital doors, and the discretion of the Medical Superintendents in admitting them (such action on either side having no warrant in strict law), the sick have been admitted as paupers and through Poor Law agency, though in rare cases the Guardians have received or enforced some after repayment in part of the expenses incurred in the relief of the sick.

At the point we have now reached, the Managers of the Asylums Board having issued their prohibitory circular of the 24th Oct, thus defining their legal position as an integral part of the Poor Law system, proceeded to take up the whole question in a broad public spirit, their attention having been drawn to it by communications from various vestries “relative to the provision of hospital

accommodation for small pox patients not being paupers." The Committee for General Purposes, in a report dated February 22nd, 1877, which was subsequently adopted by the Managers, stated that "a large proportion of the patients received into the hospitals of the Managers belong to a class above that of paupers, although they are sent as paupers with certificates from the parochial medical officers and relieving officers." The Committee further stated that on the 15th February, 1877, "the proportion of patients" (in the several asylums) "who acknowledged to having previously received parochial relief, was under 10 per cent." The replies of the Vestries, &c., to the circular letter of the Local Government Board, dated 2nd January, 1877, on the subject of hospital accommodation, confirmed the Committee in "the belief that adequate provision for the isolation and treatment of epidemic infectious diseases in the Metropolis does not exist," and they arrived at the following conclusions:—

- (a.) That such provision could be best made in a comprehensive and systematic manner, by one Central Authority acting for the whole Metropolis, not only for pauper patients, but for other classes desirous of hospital accommodation.
- (b.) That such Central Authority should not be merely a Department of Poor Law Administration, but should have the powers of the Sanitary Acts conferred upon it.
- (c.) That either the Metropolitan Asylums Board should be merged into such Central Authority, or should itself be that authority, in which case its constitution should be altered and adapted to its enlarged duties and responsibilities.

A copy of the above report was directed to be transmitted to each of the Sanitary Authorities of the Metropolis, also to the Medical Officers of Health, and they were invited to express their opinions thereon to the Managers.

Your Vestry referred the subject to the Special Purposes Committee, whose report thereon unanimously adopted, was as follows:—

"Your Committee have to report that they have very carefully considered the several suggestions contained in the report sent from the Managers, and have had before them a report presented by this Committee to the Vestry on the 17th January, 1877, submitting that it is inexpedient and unnecessary for this Vestry to provide hospital accommodation, seeing that the whole of the cases can be so easily dealt with by extending the powers of the Metropolitan Asylum Board so as to enable them to provide for all persons in the Metropolis suffering from small pox or other infectious disease, and requiring isolation in hospitals.

"Your Committee agree with the Managers that adequate provision

for the isolation and treatment of epidemic infectious diseases in the Metropolis does not exist, and that such provision could be best made in a comprehensive and systematic manner by one Central Authority acting for the whole Metropolis, not only for pauper patients, but for other classes in need of Hospital accommodation.

"Your Committee are also of opinion that the Metropolitan Asylum Board should be such Central Authority, its constitution being altered and adapted to its enlarged duties and responsibilities; that the expenses of persons not being paupers admitted into the hospitals at the recommendations of Vestries and District Boards under sec. 37 of the Sanitary Act, 1866, should be defrayed out of a Metropolitan Rate or Common Fund, and that the relief so granted to persons suffering from infectious disease should not be deemed parish or poor relief, and should not involve the loss of any rights possessed by the said persons."

My opinion having been desired by the Managers, I replied in the following terms:—

"I have much pleasure in complying with the request of the Managers of the Metropolitan Asylum District, for the expression of my opinion on the Report of the 'Committee for General Purposes relative to the provision of hospital accommodation for small pox patients not being paupers.'

"In the first place, I fully endorse the opinion of the Committee, that 'adequate provision for the isolation and treatment of epidemic infectious diseases in the Metropolis does not exist.' And I concur in their 'conclusion (a) that such provision could be best made in a comprehensive and systematic manner by one Central Authority acting for the whole Metropolis.'

"The cause of the present deficiency is not far to seek. The 37th section of 'the Sanitary Act, 1866,' gave the local sanitary authorities power to provide hospitals for the 'sick inhabitants' of their several districts, and this power would probably have been acted upon, had not the 'Metropolitan Poor Act, 1867,' (under which the Asylums of the Managers have been established), appeared to supersede by a general provision for the entire Metropolis the necessity for separate action by the Vestries and District Boards.

"The Managers have nearly met the requirements of the Metropolis, by providing hospital accommodation out of all proportion to the wants of the pauper class—thus doing the work which legally devolved on the sanitary authorities: and they appear willing, if called on, to extend and to complete the task.

"The question now is, shall they do so; or shall the duty be discharged by those to whom it rightfully belongs?

"For my own part I should be content to see the Managers go on as heretofore, providing accommodation for all comers, but with authority to receive payment for such non-pauper cases as the Vestries and District Boards may send under the provisions of the 37th section of the Sanitary Act, 1866—on two conditions; viz.:—(1) That such payment should be made out of a Metropolitan rate or common fund, and (2) That relief in the hospitals should be placed on the same footing as public vaccination, so as not to entail any loss of social or political status on its recipients, it being for the interest of the community that infectious diseases should be dealt with at the cost of the community, so far as regards hospital accommodation. This plan has the merit of simplicity—involves the fewest changes, and would entail little or no delay in execution.

"But if these conditions are inadmissible, (and seeing that 90 per cent. of the sick in the Asylums are 'not paupers,') I should prefer a

severance of the connection between Poor Law Administration and the hospital treatment of infectious diseases. This might be effected by the constitution of a 'Central Authority' (on the plan of the Metropolitan Board of Works), to be elected by the Vestries and District Boards of Works, and having power to provide accommodation for all persons 'whose isolation in hospitals is necessary for preventing the spread of disease.'

"On grounds of public policy I would transfer the execution of the vaccination acts in the Metropolis to the same authority.

"What 'powers under the Sanitary Acts' beyond those contained in the 37th section of the Sanitary Act, 1866, the proposed 'Central Authority' would require I do not know; but I venture to believe that the provision of hospital accommodation would meet the necessities of the case, leaving the local administration of the Sanitary Acts untouched.

"This 'public hospital' system would probably entail some additional expense on the ratepayers, but none commensurate with the benefits that would accrue from the safe treatment of infectious diseases which is the object in view; and whatever the increase in cost it would be borne in the same spirit as the charge rendered necessary by the establishment of a fire brigade; for it would be regarded as a premium paid for insurance against a risk as much more serious than fire, as health and life are more precious than property.

"Special provision should be made at each hospital for persons who are able and willing to pay for their maintenance, if room for such cases cannot be found, or made, at the London Small Pox Hospital at Highgate, and at the London Fever Hospital.

"But the poor ratepayer, the dependent classes and those sick persons whose isolation is enforced or solicited for the good of the community, viz., with a view to prevent the spread of disease, should have free admission.

"It is, perhaps, hardly necessary to point out that these are the classes for whom our voluntary general hospitals (where infectious diseases are not admissible) have been established and are supported. Nominally excluded from the Asylums they yet form the great bulk of their inmates through the wise disregard by the Guardians of the strict letter of the law. Sanitary Officials have had difficulty enough in persuading many such persons to go into the hospitals, and the refusal of others has frequently led to an extension of disease. What proportions the present epidemic would have attained had the generality of such cases been excluded can be better imagined than described. The exaction of payment from the sufferers will be fatal to any scheme which aims at complete isolation in suitable cases.

"It would be easy to enlarge on the subject, to which I have long given earnest attention, and which I have dealt with, in reports addressed to my Vestry, the latest of which I beg to submit to the Managers in further exposition of my views."

In the report referred to in the last paragraph of my letter to the Managers (No. 15, 1876, read January 10, 1877), I had dealt exhaustively with the letter of the Local Government Board (Jan. 2, 1877), in which your Vestry were urged to provide hospital accommodation for the non-pauper sick under the 37th section of the Sanitary Act, 1866; and after pointing out the several modes in which this object as a means to meet a temporary emergency could be met, I concluded by stating my opinion that

"The wisest course with respect to the future, for all time, would be

to ask the Metropolitan Asylums Board to go on providing whatever hospital accommodation may be required for all classes, as they did, to the extent of 2,000 beds, in the last epidemic, when, with legitimate satisfaction, they were able to boast they had not turned a sick case from the doors. It may be true," I added, "that by the strict letter of the law the Managers were appointed to provide for the pauper class only, described, however, in the preamble of the Metropolitan Poor Act, 1867, as the 'sick poor,' and in the body of the Act as persons 'chargeable to unions and parishes.' The object of the Act, however, it may be fairly believed, was as much preventive or sanitary, as medical or curative. There is good reason for believing that the Managers took this view of the case at the outset, and that they contemplated the provision of hospital accommodation on a much larger scale than has been done, judging from the space they procured for the purpose in different parts of the Metropolis. These sites are adequate for sick persons in all classes of the community, 'whose isolation in hospitals is necessary for preventing the spread of infectious diseases.' Practically, moreover, I believe I am correct in stating that a large proportion, if not the majority, of cases treated in union hospitals from the beginning have been persons 'not destitute,' not 'paupers,' not 'in need of poor relief,' excepting as the result of sickness—the Guardians throughout London having with a wise discretion sent, and the Managers admitted, all comers. Let it be remembered, moreover, that if expense is in question, Guardians and Managers alike can compel those who are able to do so to pay for their own maintenance. Separate hospitals, or special wards in the same hospital might be set apart for those who can pay, and indeed, classification of persons is in any case necessary. But the question of isolation of cases is of more importance to the community than the question of cost; and whether sanitary authorities or the Asylums Managers provide the accommodation, the same ratepayers will have to find the money. The work can be done more cheaply, more speedily, and more efficiently by one Central Board, than by numerous local sanitary authorities. The hospitals once built, moreover, and a skeleton staff of doctors, nurses, and other officers provided, we should be prepared for any epidemic, and should be spared the periodical recurrence of panics. On the other hand, if vestries and district boards provide local hospitals, not only will the first outlay be great, but each will require a staff of officers, got together with much expense, and with difficulty, only to be scattered at the close of the epidemic; and, possibly after all, the hospitals will not be wanted, unless the beds in the Poor Law Hospitals should remain untenanted! It may be said, however, that it is not right to 'pauperise' people by sending them to 'rate supported hospitals;' but why need they be pauperised, even supposing they are not able to maintain themselves? It is the fact that we often succeed in effecting the removal of sick persons by the most earnest entreaties addressed to parents, and by appeals to a sense of public duty. The cases are sent to hospital for the benefit of the community, as much as (or, rather, a great deal more than) for the benefit of the individual, though I would be the last to underrate the benefits of hospital treatment of infectious diseases. Why, then, should not the precedent of vaccination legislation be followed when dealing with the disease which it is the object and, in the vast majority of cases, the effect of vaccination to prevent? Any gentleman who hears me may go and be re-vaccinated at the present moment, and within a few doors of this Hall, at the public cost, and out of the poor's rate, without being pauperised—without losing his privileges as an elector. Why? In order to lessen the risk to the community of his catching small-pox, which is justly regarded as a public danger. Is it reasonable, then, to pauperise an artisan, when he is so unfortunate as to suffer in his household, or person, from the disease we are so anxious to prevent, because he, unwillingly indeed, but

from a sense of public duty, and for the benefit of the community, consents to go, or let his child go, to a rate supported hospital? Would not a vestry hospital be a 'rate supported hospital?' I confess I fail to see any practical difference between hospitals supported by rates. It is a question of taking the money out of the right hand pocket or the left. In such a case all distinctions of pauper or non-pauper should be abolished. Treat all alike as suffering from a personal calamity, which may grow into a public danger, and act on the principle *salus populus, suprema lex*. But again I say, and if we are to consider questions of economy, if there be a difference in the cost of one plan and the other, the palm of economy must be awarded to the Asylum plan, for the Managers and the Guardians can, as already stated, recover the expenses of maintenance if they think fit; and the Guardians, at least, are already provided with a staff of collectors for this very purpose.

"The present outcry is for a 'Central Health Board for the Metropolis.' The Asylum Managers practically constitute such a board, and, if necessary, they could be endowed with legal powers to provide all the hospital accommodation required for the safe treatment of the infectious diseases. A measure to extend their power in this direction could be passed next month if Parliament thought fit. Practically, such a measure would be tantamount to a consolidation of sanitary authorities—a central board to provide hospitals, local boards, with an efficient staff to carry out the details of sanitary work, to visit the sick, to remove suitable cases to the hospitals, to see to disinfection, &c. The benefit to this metropolis would be incalculable. The fact, however, cannot be too often repeated, that, practically, the Managers can even now do all, or nearly all, that is necessary, at the present time, though theoretically it may be *ultra vires*. Therefore, it is desirable the law should be amended; and it is fair to infer that the Government, which has consolidated the Public Health Acts for all England, London only excepted, and at the head of which is the author of the famous saying, '*Sanitas sanitatum, omnia sanitas*,' would yield a ready consent to such a measure; while the skill and energy with which the Managers of the Asylums Board have hitherto performed their arduous and important duties afford ample guarantees for the success of so grand and beneficent a scheme.

If, however, contrary to my expectation, this plan should prove impracticable—from whatever cause—permanent provision of hospital accommodation may be made by the voluntary united, or the independent, action of vestries and district boards, or by the creation of a Central Health Board, on the model of the Metropolitan Board of Works, or the Sick Asylums Board, for which, however, Parliamentary powers would be necessary."

It may be added that the Society of Medical Officers of Health, before which I had on more than one occasion advocated my views, as set out above, took into consideration the report of the Managers, and expressed agreement "with the opinion 'that adequate provision for the isolation and treatment of epidemic infectious disease in the Metropolis does not exist,' and under existing circumstances the Society endorses the conclusion that such provision could be best made in a comprehensive and systematic manner by one Central Authority acting for the whole Metropolis."

"As regards the constitution of the Authority and the administration of the infectious disease Hospitals, the Society is of opinion that such Hospitals, regarded in the light of a sanitary provision for the advantage of the general population, should be

completely dissevered from any relation with pauperism." (May 1877.)

On the 16th June, 1877, the Committee for General Purposes of the Metropolitan Asylums Board, reported *inter alia* the purport of the replies received from the Sanitary Authorities to their report (February 22nd) showing that certain Vestries and District Boards and numerous Medical Officers of Health had signified their (general) "concurrence with the views expressed by the Managers." Other Vestries, &c., while concurring mainly with the views expressed by the Managers, disagreed with the somewhat obscure recommendation that "the proposed Central Authority should have the powers of the Sanitary Acts conferred upon it," evidently, the Committee add, through misconception of its meaning. The Committee, therefore, explained that they did not intend "that the Central Authority should supersede or interfere with the existing Vestries and District Boards in the ordinary and important duties which devolve upon them, but merely that it should have such powers of the Sanitary Acts conferred as would enable it to deal efficiently with all cases of epidemic infectious diseases occurring in the Metropolis, and to take steps for checking the spread of such diseases." (Parenthetically it may be observed that this would be to interfere with and to supersede the existing authorities, whose duty it is to take such steps for checking the spread of infectious diseases: and that, in the opinion of the Committee, they deserve to be so superseded, would seem to be apparent in the next paragraph of their report in which they say that) "Little has been done by the existing Sanitary Authorities of the Metropolis to check the spread of small pox, and that still less have efficient steps, or has general action been taken to stamp it out: and hence it cannot be a matter of surprise that the disease has continued to rage so virulently for so lengthened a period." Leaving it to others to decide to what extent this reproach may be deserved by the Sanitary Authorities; and to what extent these are impeded in their action by insufficient powers, I venture to say that these bodies even "with the explanation now afforded of the meaning of the recommendation with regard to the delegation of the powers of the Sanitary Acts," would not look on the "constitution of such a Central Authority as a great public safeguard, and as the most desirable plan of relieving them of a very difficult and unpleasant part of their duties," nor would they be prepared to admit that these duties "from various causes they are unable to satisfactorily perform.*

It need hardly be stated that the above reports were forwarded

* The Committee's Report was, I believe, "received" by the Managers; who took action on it so far only as to wait on the Local Government Board to obtain information as to the Board's views of the position the Managers would hold in the event of the 64th clause of the Public Health (Metropolis) Bill, 1877, referred to subsequently, becoming law.

to the Local Government Board, which had already received considerable enlightenment as to the views of Sanitary Authorities on the provision of hospital accommodation for "that large class of persons not needing relief, but whose isolation in hospitals is necessary for preventing the spread of the disease" *i.e.*, Small Pox. (Local Government Board's letter, Jan. 2, 1877). The result of this enlightenment is now visible in the provisions of the "Public Health (Metropolis) Bill, 1877, which, though not printed, was read a second time in the House of Commons on the 11th June, 1877. The 56th to the 63rd clauses of the Bill (omitting the 57th and 58th) give power to the "local authority" (*i.e.*, Vestry or District Board of Works) to provide hospitals by re-enacting the 37th clause of the Sanitary Act, 1866; enable the Local Government Board to combine such authorities on their application for providing hospitals; provide for the management of the hospitals by a joint committee: for the expenses of the Committee, and confer borrowing powers, &c., &c. I do not enter into details on this part of the scheme, because I do not expect it will be put into operation whenever the Bill may pass. I venture, however, to quote in its entirety the 64th section, to which I attach the greatest importance, *viz.* :—

"The Managers of any asylum district constituted under the Metropolitan Poor Act, 1867, and the Acts amending the same, *may*, from time to time, with the approval of the Local Government Board, contract with any local authority under this Act for the reception, care, and maintenance in any hospital belonging to or under the control of such managers, of any person suffering from any dangerous infectious disorder within the district of any such local authority."

It is to be hoped that when the Bill is in Committee the permissive power to contract will be made an obligatory one on the Managers; and it is to be remarked that, although it is probable only the Managers of the Metropolitan Asylums Board would ever think of entering into such a contract for the reception of the infectious sick, all the "sick asylums" Boards (and there are several such in the Metropolis) are embraced within the terms of the section. I think it may be fairly inferred from all that has taken place that the Local Government Board is not disposed to alter the constitution of the Metropolitan Asylums Board, and that they are of opinion (as I am) that "the provision of hospital accommodation" by this excellent Board "would meet the necessities of the case, leaving the local administration of the Sanitary Acts untouched."

In a roundabout way the 57th clause of the Bill makes a provision which would have the desired effect of depauperising the relief given to the "non-pauper" sick in the hospitals, it being assumed that such cases would in future be sent by the sanitary authorities, and not through the agency of the Poor Law officials. The clause

provides for the " recovery of cost of maintenance of patient in hospital;" any expenses incurred by a local authority in maintaining the non-pauper patient in the hospital " shall be deemed to be a debt due from such patient to the local authority, and *may* be recovered from him at any time within six months after his discharge from such hospital, &c., or from his estate in the event of his dying in such hospital, &c."

No doubt cases will from time to time be admitted into the hospitals to which this section will be applicable, and there will be other cases where the patient will be willing and desirous to pay all the expenses incurred on his behalf (though in my judgment the London Small Pox Hospital at Highgate, and the London Fever Hospital at Islington are the more suitable establishments for such cases); but I am convinced that the object we all have at heart, viz., the isolation in a hospital of every suitable case needing to be isolated, will be utterly frustrated if any attempt is made to make the hospitals generally self-supporting. I need not enter into the question here, however, as I have already dealt with it above, and in a special report on the Bill which I addressed to your Vestry on the 27th June. I am convinced, moreover, that the compulsory exaction of payment will fall through in practice; for the mere threat of such an exaction would have the effect of rendering the hospitals comparatively useless. The non-pauper sick would not go to them; the pauper sick would not fill a tenth of the beds. Moreover at the present time, though the Guardians have ample powers to recover just as the 'local authority' would have under the proposed Bill, they have realized the absolute futility of the endeavour to do so in all but the rarest cases; and I contend, that in generally abstaining from pressing their legal claims, they have exercised an admirable discretion, and justly earned the thanks of the community by which the hospitals are maintained for the public good. I object to sham legislation and to the creation of powers not intended to be used. I object to the permissive "*may*" in the administration of sanitary law. Either a thing should be done or it should not. If it is right make it compulsory. If it is wrong or indifferent leave it alone. Let us face this question boldly and firmly, and act up to the views that are now held by nearly all authorities, by dealing with infectious diseases as we do with vaccination. Stamp them out at the public cost, charge the expense to a Metropolitan rate. Separate the relief in hospitals from all taint of pauperism; but let us at the same time press for additional powers to enable us to collect into the public rate-supported hospital any sick person whose retention "at home" is a danger to the occupants of the same house and to the locality. Let us, moreover, take whatever other steps may be necessary to deal effectively with infectious disease, especially by providing disinfecting chambers, mortuaries, &c.

I have ventured thus to place on record a sketch of the steps which have led up to our present more hopeful position; in the belief that we are on the eve of great and beneficial changes, and that your Vestry will have no cause to regret the part we have taken in helping to bring about a satisfactory solution of one of the most interesting problems that could be brought under the notice of sanitary authorities, or with which sanitary officials have to deal.

SMALL-POX.—HISTORY OF THE EPIDEMIC.

Although the epidemic is not by any means over at the present writing (August) we see, I believe, the beginning of the end in the considerable decrease in the number of cases in the northern parts of the parish. There was, it is true, a decided increase in the number of fresh cases in June and July, in the south-western corner of Brompton, but our success in isolating the sick led us to entertain a hope, justified by the event, that the disease would not spread as we should have expected it to do in more crowded and poorer parts of the parish, such *e.g.* as Kensal New Town, where much difficulty, from a variety of causes, has been experienced in effecting the removal of the sick to the hospital. I think the time has arrived, therefore, when the leading facts of the epidemic, so far as they are known to us, may be stated—not that I have much, if anything, new, to say on the subject, as I have kept your Vestry regularly informed of its progress. The annual report of the Medical Officer, however, being a permanent record, it appears desirable to recapitulate herein whatever of interest in a sanitary point of view may have happened, though dealt with already, piecemeal, in my monthly reports.

Small-pox, then, began to spread epidemically in Kensington, so far as we know (this reservation being necessary, owing to the concealment of cases, always more common and more easy at the commencement of an epidemic) in the late autumn of 1876. For many months the disease was almost entirely confined to the northern parts of the parish, and of these no section suffered so severely as Kensal New Town. The portions of this district belonging to Paddington and Chelsea appear to have been invaded in an equal degree. The cases in the South Sanitary district, *i.e.*, all Kensington south of the Uxbridge Road, were few in number, and occurred sporadically until June, 1877, when they increased considerably, why or wherefore I am unable to say: but popular opinion ascribed the spread of the disease to infection derived from the new hospital west of the railway and cemetery at Brompton, between the Lillie Bridge and London Athletic Club Grounds, an opinion in my judgment not tenable. Some persons again, thought the disease might have been spread by the clothes of the hospital nurses in their intercourse with the outer world, but I have no reason to doubt that the precautions taken to guard against this not impossible source of

infection were sufficient, and that the fact cannot thus be explained. The cases in this southern district were more scattered than in the north, and we had no such groups of cases in single houses or in streets, &c., as I have had occasion to call attention to as occurring in Kensal New Town, &c. The spread of the disease in a general way may be attributed to the neglect of vaccination under circumstances elsewhere adverted to, and especially to the neglect of re-vaccination : to the concealment and consequent non-removal of cases, to the overcrowded condition of the houses, and to the want of caution on the part of the sufferers, in the case of adults : of the parents, when children were the victims. An adult having a slight attack of modified small-pox may scarcely feel ill, and if disinclined to go to the hospital, is still less disposed to submit to the needful restraints "at home," And what a "home" it is in too many cases! Who can wonder that the patient is glad to get into the fresh air, and to mix with friends and neighbours? Should the sickness be not severe, and the sufferer be not much marked, say on the face, he or she is disposed to conceal the nature of the illness and go to work—in the workshop or the laundry, it may be. Here we have a fruitful sowing of the seeds of disease; and even if the father or mother of the family be not sick they often go to their daily labour from rooms full of deadly germs which they may convey in their clothes and sow broadcast. The "clean clothes" sent home from the laundry may in like manner become the channel of infection. Certain it is that in many cases we have found manglers and ironers going constantly to and fro between the pestilential "home" and the laundry, prior to the report of sickness in their families. Children too, how difficult to keep them at home when they begin to get better! Parents are glad to get rid of them for quietness, and that the little ones may benefit by the purer air outside the dwelling. And if they go not out, how impossible it is to keep them to their rooms! On the staircase the infection is constantly spread to other families in houses let out in tenements. We have had many well-authenticated examples, moreover, of the spread of infection through every part of the house, when there appears to have been a thorough anxiety on all hands to prevent it—showing that in the strict sense of the word, the sufferer was "without *proper* accommodation," though lodged in a separate room with his nurse. But then, the nurse is usually the wife or mother, and it is too much to expect that in the ranks of the poor those precautions which are so successful in large houses tenanted by single families can be practised; hence it follows that there is no safety unless the patient is removed without delay at the commencement of the attack, and the room, clothing, &c., disinfected. In many instances where this has been done, no second case has been recorded. It is astonishing, however, how little people are impressed with the importance of

dealing energetically with a first case of illness. They hope there will not be a second, and they often say if there should be, the patient shall go to the hospital. Often the father will send his child, but will not go himself. Vaccination again is not seldom railed against till small-pox appears, and then when the mischief has begun, and perhaps cannot be stopped, the people rush to the public vaccinator. Through schools the disease may be spread, for as no law forbids the exposure of infected things on the body of uninfected persons (so we are advised); children may go to school in garments reeking with infection; and unless attention is called to the possibility of sickness in the house by the absence of a pupil, the school-officer has no warning of the risk to which the entire establishment is exposed. It is no uncommon thing I fear for infected clothes to be sent to the wash without previous effectual disinfection, and it is a common practice to hang out infected clothing, bedding, &c., in the back yards, called by courtesy gardens, and thus the winds are made to diffuse disease in every direction. In all these ways we know the malady has been spread; and indeed, considering the facilities for the diffusion of infection, and our limited powers to check it, the marvel is not that we have had so much, but that we have had so little small pox in our midst. On the whole our efforts for effecting the removal of the sick have been more successful during the present epidemic than in that which raged in 1871-2, and the deaths 'at home' have consequently been fewer. Thus in 1871 there were 62 deaths 'at home' and 58 in the hospitals: and in 1872 the deaths 'at home' and in hospital were 39 and 29 respectively, whereas in the 12 months ended July 31st, 1877, the deaths at home were only 25, and those in the hospitals 44. It must be confessed, however, that the present epidemic has not attained the proportions of the former one, for while our highest monthly record of cases in 1871-2 was 116, the largest monthly total during the present epidemic has been 50 only. Estimating the mortality at 20 per cent. on the attacks, the cases kept at home would be 125, our record to the end of July giving 108, thus showing a smaller number of concealed or unknown cases than in 1871, when we heard of 164 cases only, out of an estimated total of 310.

Following the custom of former reports, I now proceed to mention a few local outbreaks of the disease which were traced to their origin; for information of this kind tends to destroy the fatalistic belief that as infection is "in the air," it is useless to try to prevent the spread of disease. The first group of cases I shall mention commenced—at any rate our knowledge of it began—in the kitchen of Denbigh Villa, in Denbigh Terrace. The primary case was that of a man aged 52 years, of whose illness we heard nothing till the case was approaching a fatal termination,

It appeared that on the day of his death the widow called in two little girls, neighbours' children, to write letters, &c. One of these children was in due course attacked at her home a few doors off in Denbigh Terrace. Occupying the parlours of Denbigh Villa were a married couple, with whom a widowed niece was staying on a visit. This woman went down into the rooms occupied by the family of the deceased, and subsequently was taken ill. Both these cases were removed to the hospital, and both recovered. To return to the second house in Denbigh Terrace. On the top floor of this six-roomed house there lived a married couple and their son, a pupil teacher at a neighbouring school. On account of the little girl's illness the latter discontinued his usual work, and about a week after her removal he was taken ill, and was removed to the hospital, where he did well. The occupier of this house (father of the little girl) with his wife and four children lived in the parlour and one room in the basement. A few days after the removal of the young man the poor woman (wife of the occupier) was confined, and with her infant immediately suffered from small-pox. The child died when six days old; the mother recovered. It was, of course, impossible to remove these last cases to the hospital.

Some little time after these cases had been dealt with as an apparently isolated outbreak, we heard of nine cases in two houses in Lonsdale Road, at some distance from Denbigh Terrace. The first of these cases appeared to be distinctly traceable to infection received from the little letter-writer referred to above. It began in the middle of September, and though the nine cases occurred in three families, in two houses, and in the practice of three medical men, we heard nothing of the outbreak till attention was called to it by the registration of a death on the 30th October. The place was at once visited and thereafter kept under supervision.

It was found that five children in one family in the first house had been affected, and all recovered. In a second family three children were attacked, and two, aged seven and nine years respectively, died. One case, that of a married woman, occurred in the adjoining house, and she died shortly after giving birth prematurely to a child, which survived its birth only a few hours. This woman had not gone into the infected house, and her illness was, presumably, the consequence of the exposure of infected clothing in the adjoining backyard.

The next case in this group was that of a man who was on intimate terms with one of the above mentioned families, and who is supposed to have received the infection from the clothing of the father of the sick children; the father living in the same room with them, and going about his ordinary avocations without any precautions against the spread of the disease. This same man, or his son, in similar circumstances, appeared to have been the originator of a still further outbreak by which two men were stricken. One of these men died, and his sister was infected while nursing him. The history of the attack in the second of these men is curious. The infecting man wishing to attend the funeral of his little sister who had died, he said, of bronchitis (the *secondary* disease named in the medical certificate of the cause of death!) borrowed his friend's coat, that he might make a respectable appearance. Thirteen days afterwards the lender was stricken with small-pox! How

many more cases may have been caused, through untraced ramifications of infection from these multiplied sources, it is impossible to say. It may be remarked, however, that in addition to the cases mentioned above (none of which, save the group of nine, occurred in Lonsdale Road) numerous others subsequently occurred in several houses on the south side of Lonsdale Road, where the disease first appeared, and not one on the other side of the road. There is good ground for the belief that the disease was spread by infected clothing, bedding, &c., hung out in the back yard; anyhow, we were unable to trace the successive cases to any intercommunication between the families in the several houses, wherein the disease made its appearance.

The following cases deserve mention as demonstrating the danger of infected body clothing:—

A case of small pox was sent to the hospital from the Brompton Consumption Hospital. It is to be presumed that the sufferer contracted the disease by contact with the infected clothing of a visitor, as she had been in the hospital nearly two months. A similar case occurred in connection with St. George's Hospital, the patient having fallen ill at such a time after her discharge as to prove she must have received the infection in the hospital from a visitor, for there were no cases of the disease in the hospital at the time, though cases did occur subsequently.

A baby, aged six weeks, being ill, a woman living in another street nursed the child, who died in her lap. Out of this lap the woman herself and her children ate shrimps for tea the same night, and in about thirteen days her girl, aged twelve years, sickened with small-pox, and was sent to the hospital.

Again. A woman who lived in the same house where the baby died, went occasionally into the sick room. After the usual period of incubation, this woman's husband and her daughter were taken ill and removed to the hospital.

Now, as not one of these sufferers went near the sick baby, it is clear they were infected by the clothing worn by the women (themselves unaffected throughout) who assisted in nursing the child, and who probably were ignorant of the danger to which they were exposing their families. Take another case:—

A girl was very ill of small-pox. The mother was a laundress, and one of her children had already had small-pox recently. The house was (as usual) full of people, from whom she was anxious to conceal the nature of the illness. The father, a carpenter, employed in a builder's workshop at South Kensington, slept in the same room with the girl, acting as her nurse, and each morning he went to his work in his infected clothes. We got her removed to the hospital, and we do not know that she was the cause of spreading the disease. At one period in the epidemic, however, there were numerous cases among stonemasons and their families, the men working in shops in an adjoining parish. We could not account for the outbreak save on the supposition that the contagium had been conveyed in the mens' clothing.

The practice of exposing infected clothing is a common and dangerous one, and there can be no doubt that by it the disease is frequently disseminated. It has, indeed, been a most instructive

study to trace the spread of the infection in this way, as we have been able to do, from street to street, from house to house, and from person to person, but it is the opinion of the Law and Parliamentary Committee of your Vestry that the 38th section of the Sanitary Act, 1866, is not adequate to meet such exposure of infected things. The section referred to provides that "any person, who without previous disinfection exposes any bedding, clothing, or other things which have been exposed to infection from any dangerous infectious disorder shall on conviction of such offence, before any justice, be liable to a penalty not exceeding five pounds." If any person conveyed through the street a coat or dress that had been for ever so short a time exposed to infection in a sick room, he would be liable to the penalty; but it would seem that a person may with impunity wear, in public places, a suit of clothes that had been for an entire night exposed to infection in the same sick room! The danger is as great in the one case as in the other.

Again, if any person "moves or exposes" in a public place any infected bedding, &c., unless it is in course of transmission, under proper precautions, to a disinfecting chamber, he is liable to the penalty. But it would seem that he may with impunity expose that same bedding in a back yard, over the dwarf walls of which the winds impartially disseminate the poison it contains in every direction.

The following case is deserving of notice as showing the far-reaching effects of neglect of sanitary precautions. Several cases of small pox had occurred in a house, and the family laundress, hearing of the illness from time to time, caused enquiry to be made if it was an infectious character, and the reply was invariably "No." Early in January a child died, and the enquiry being repeated the same answer was given, the statement made being that the child had died from diarrhoea—the secondary disease mentioned in the certificate of the cause of death. The condition of one of the sheets sent to the wash on the day following the child's death (it was covered with scabs, &c.) left no doubt on the mind of the laundress of the nature of the illness; and, pressing her enquiries, she ascertained that the child had died from small pox. There is reason to believe that for several weeks the infected clothing had been sent with other things to the wash without any, or only very imperfect, previous disinfection. The date of the offence, however, specially referred to below was Monday, December the 18th. On the 19th December the daughter and niece of the laundress sorted the clothes, and on Monday, the 1st January—exactly thirteen days afterwards, the true period of incubation of small pox—both were taken ill. About this time the nephew of the laundress, a soldier on leave of absence, went to the house on a visit. He left for Birmingham on the evening of the 15th January, very ill, with all the symptoms of an attack of small pox, and he died on the 18th. The regimental surgeon who had charge of this case, not being acquainted with the soldier's immediate history, did not recognise the disease as small pox. The death was registered as "(Epidemic) Spinal Meningitis." I received a letter from the Medical Officer of Health, however, who wrote—"I should be inclined to conclude that the disease was hemorrhagic small pox killing before the true eruption appeared. The

man had great pain in the head and back, vomiting, and a purpuric eruption." He also said, "the woman who washed his clothes took small pox and died on the 8th February, and expressed her belief that she took the disease from the clothes." That she did, I fear there can be no doubt, and the case is mentioned as another illustration of the danger of washing infected garments, &c., until after they have been efficiently purified by the combined agency of heat and chemical disinfectants. By direction of your Vestry proceedings were taken at the Hammersmith Police Court against the person who had sent the infected clothes to the laundry, and he was fined two pounds and costs.

Danger has frequently arisen from the non-detection of the disease. This may be from the mildness of the attack, for then the disease is sometimes supposed to be chicken-pox, or if it is suspected to be small-pox, the case is thought of too little importance to be sent away. The following instances may be cited by way of illustration:—

A child being taken ill, an "unregistered" practitioner was called in, who failed to recognise the disease as small-pox. A fortnight after two other cases occurred in the same family, clearly due to infection from the first case. A sick adult relative living in the same house visited one of the popular dispensaries, where advice and medicine are supplied for a very small fee. Two days after he died, somewhat suddenly and unexpectedly. The cause of death returned was "syncope," or fainting. There is no reason to doubt that he died of small-pox, and within a fortnight two other members of the family were stricken, and removed to the hospital. There were three deaths of unvaccinated children in this family.

Again, there is infection in the dead body as the following cases show:—

Two undertaker's men were engaged to remove a body from one of the hospitals. They had to place it in the shell. At the expiration of a fortnight they were both in the hospital, suffering from small-pox themselves, and one of them (unvaccinated) died.

This case shows the danger of contact, even with the dead, and illustrates the necessity of immediate confining, disinfection, and speedy burial. The following cases are not without interest:—

A man applied for relief at a dispensary one day early in the Christmas holidays. The officers were absent, and he was directed to call again next day. The eruption of small-pox was then fully out on him! He had been drinking with his friends, and going from one public-house bar to another in the interval between his visits to the dispensary. Steps were being taken to remove him in the parish ambulance to a hospital, when it was discovered that he belonged to another parish, and he was forthwith sent away, and directed to go straight home!

A poor female tramp had a sick baby. She took the child to a dispensary, and spent a long time in the common waiting room with a number of other people. The child was found to be suffering from small-pox, and an order for the ambulance to take mother and child to the hospital was given. The woman had no home, and no place to wait in; so with the child in her arms she went through the streets to the residence of the ambulance driver, where her presence excited no small alarm. She was sent back to the dispensary, whence, some hours afterwards, she and the child were conveyed to the hospital.

Take another case :—

Two lads, who had the disease very mildly, shared a room on the ground floor with their father and sister. The father was persuaded to let the boys go to the hospital that they might be out of harm's way and not spread the disease; but when he found he would have to pay he refused. The boys being, in one sense, scarcely ill, though still infective and dangerous to others, is it to be wondered at, that their father, an artisan, should have been unwilling to go to a considerable expense merely for the sake of the health of other people when he had, as he thought, no reason to fear any further ill-consequences to himself or his family from keeping his children at home? He was, however, subsequently attacked by the disease himself.

Another case, illustrating the danger of keeping patients at home, may be cited :—

A young woman was reported ill on the 28th December, and her family refused to let her be sent to the hospital. Four or five weeks after this, three other members of the family were stricken and removed to Hampstead. The isolation, by removal, of the first case, even within a fortnight from the commencement of the attack would have saved the other members of the family.

The following outbreak was a peculiarly painful one :—

Two children were lying ill in a kitchen at a house in Golborne-terrace. Living and sleeping in this room were three other children, as well as the mother and father. The latter was following his usual avocation daily. As he refused to allow the children to be sent to the hospital, a magistrate's order was obtained for their removal, on the ground that they were "without proper lodging or accommodation." The father having disobeyed and obstructed the execution of the magistrate's order, he was summoned to appear before Mr. Bridge at the Hammersmith Police Court, by whom, on his continued disobedience, he was sentenced to two months' imprisonment in default of paying a fine of five pounds, for he had none but infected goods, which could not be distrained. * The magistrate directed that his order should be read to the wife, and that if she disobeyed it she should be brought before him. She did disobey and was summoned accordingly. Inspector Langman supplied a nurse to take charge of the children in the mother's absence, and provided them with much-needed food and firing. Husband and wife appeared together at the Court, the former having found means to pay the fine; and expressed contrition for their disobedience and gave consent to the children being sent to the hospital, where they did well. Subsequently two other persons, a mother and her recently born infant, were attacked in the same house and both died. Another case in an adjoining house was traced to the same source of infection.

The following fatal case excited a good deal of stir at the time, and was the cause of a sharp local outbreak :—

The deceased, a single woman about 34 years of age, and apparently of morose and eccentric habits, lived alone in a first floor front room in a state of extreme squalor. On Sunday, March 18th, 1877, a female friend called to see her but was not admitted into her room. She opened the

*I believe this was the first case in which the additional powers to enforce the removal of cases of infectious diseases had been put in operation. These powers conferred by the Sanitary Acts Amendment Act, 1874 (37 and 38 Vic. cap. 89, sec 51), were rendered necessary by the incompleteness of the 26th section of the Sanitary Act, 1866, to which, at my instance, your Vestry called the attention of the Local Government Board.

door a few inches and said she thought she had small-pox or erysipelas. From that day she was seen no more alive, nor was anything so much as heard of her by the other inhabitants of the house; but her dog began to bark and howl on Wednesday, the 21st, and continued to do so until the door of the room was broken open late at night on Friday, the 23rd, when the wretched creature was found lying on her back in bed, naked, exposed, and dead, probably having died three days previously. The state of the room, from filth of every sort, and the evidences of entire neglect and wretchedness, exceeds belief. A medical man was called in and recognised small-pox as one of the diseases from which the deceased had suffered. The coroner was communicated with, but not deeming an inquest to be necessary, he directed his officer to report the case to me.

Several other cases subsequently occurred in this house; but the dates prove that the infection was derived from the living woman, and not, as was supposed, from the dead body.

A fatal case occurred under the care of an unregistered practitioner :—

We were unable to persuade the patient, a married woman, to go to the hospital, though her husband gave his consent. The family were very poor, and it subsequently transpired that they subsisted during the week the illness lasted upon money obtained by pledging infected things with no fewer than three pawnbrokers, all in the adjoining parish of Paddington !

A boy having died from small-pox, and there having been no medical attendant, an inquest was held and a verdict of manslaughter was returned against the woman in whose charge the boy had been placed owing to the outbreak of the disease in his father's dwelling. (The boy's brother also had the disease, was sent to the hospital and recovered.) The grand jury ignored the bill on the graver count, and no evidence being offered on the minor count, charging the woman with a misdemeanour, she was discharged. The proceedings, however, will not have been without good effects.*

In the course of one month no fewer than seven cases of small pox were reported in as many houses, the sufferers being domestic servants, who, no doubt, had contracted the disease in the course of Sunday visits to friends. No second case occurred in any of the houses referred to, all the cases having been removed to the hospitals and the infected rooms, clothing, bedding, &c., having been properly disinfected. The fact is mentioned as an illustration of a peculiar danger, and it shows the necessity for judicious restriction of domestic visitations during the prevalence of epidemic disease.

*The following case reported in the daily papers on March 2nd shows that the law is strong enough to reach and to punish in such cases of neglect :—"At the Manchester Assizes, Agnes Turner was charged with having caused the death of her son Robert Turner, 18, by neglecting to procure proper medical aid for him. It appeared that the lad was suffering from small pox, and his mother, fearing that he would be removed to the Small Pox Hospital if it were known that he was affected with the disease, kept the secret until the possibility of recovery was hopeless. The prisoner was found guilty, and the judge sentenced her to two months' imprisonment without hard labour."

The last outbreak I shall refer to occurred quite recently (June and July, 1877.) :—

This outbreak is perhaps, the most striking that has come under our notice during the epidemic. Twenty-one persons lived in a house, in Wheatstone Road, viz., three families in the parlour, first, and second floors, respectively, besides a single man in the kitchen who had had small pox previously. The disease made its appearance in the parlour floor of the house some time in June, the first case being that of a girl aged ten. The parents of this child attempted to conceal the nature of the disease, even from the father's brother, who lived on the first floor, and who has been the greatest sufferer from the outbreak. No preventive measures were taken to check the spread of the disease. On the 19th of June the suspicion entertained that the child had small pox was communicated to us in an anonymous letter. The house was visited the same day, and the suspicion proved to be just. In three rooms there lived the parents and two children. The sick girl was in a room by herself, and the mother was nursing her. An absolute refusal was returned to Inspector Langman's urgent and repeated requests that the child might be sent to the hospital, it not being a case in which the compulsory powers of removal could be enforced. Other cases, to the number of ten, subsequently occurred, and these, with one exception, which was very light and was concealed from us, were sent to the Fulham Hospital. Of the 22 inmates of the house, 11 were attacked and four died, including one adult, the father of the little girl who was first taken ill and who recovered. This child, it is stated, was running about for days with the scabs of the disease on her face; and it is said, moreover, that the blankets in which she lay, covered with scabs, were hung over the yard wall, a mode of exposure of an infected thing which your Vestry's Law and Parliamentary Committee have advised is not an offence within the meaning of the 38th section of the Sanitary Act, 1866. At the rear of the house in which these people lived, two other cases occurred in other two houses, the disease apparently having been spread by the exposure of the before-mentioned blankets, which, by the way, first excited suspicion as to the nature of the illness. Of these two cases one died. The most striking fact, perhaps, in connection with this outbreak, is the condition of the household as to vaccination. The man who died had not been vaccinated; nor had either of the dead children, two aged 5 years, one 4 years, and one 9 months, two of these being the children of the deceased man's brother. The boy, 7 years old, who was very dangerously ill, had not been vaccinated. The girl first attacked, aged 10, had not been vaccinated. The other six persons attacked, all of whom had been previously vaccinated, had the disease very lightly indeed.

It may be asked how was it that these people, the children especially, had not been vaccinated? The answer is simple. Those of the children that were born since the Compulsory Vaccination Act came into operation, were, with two exceptions, not born in the parish: and their cases had, therefore, never come under the notice of the vaccination officer. Of the two excepted cases the vaccination had in one of them been repeatedly postponed on account of the child's ill-health — (he died); and in the other case (also dead) the sorrowing mother confessed that she had changed her residence from place to place repeatedly, to escape the

notice of the vaccination officer—having formerly an objection to vaccination, which she no longer entertains! This explanation is necessary to clear an efficient officer from the imputation of neglect of duty that might otherwise be thought to attach to him. There may, nay, there must be, many similar cases to the above, in respect of non-vaccination in Kensington, especially in children over five years of age; for we know that for several years past the population has increased, year by year, by the addition of between two and three thousand immigrants. There is no means of discovering these cases except by a house to house visitation.*

It may be mentioned that the rate of mortality from small pox in vaccinated persons is about 13 per cent., and in unvaccinated persons nearly 50 per cent. But it should be mentioned that though the mortality in "vaccinated" persons taken as a whole, may be as high as 13 per cent., the mortality in "vaccinized" persons is much lower; lower in proportion to the efficiency of the vaccination. Death from this disease in an efficiently re-vaccinated person is an almost unknown occurrence.

The Registrar-General towards the close of the year published some startling statistics, showing the protective influence of vaccination in children below the age of four years:—"There were," he says, "348,441 children living in London in the middle of this year between the ages of one and five years; 317,081 had been successfully vaccinated, and 31,360 were unvaccinated. At these ages 50 deaths from small pox were registered in London between 1st January and 18th November, 1876. Of these, one was certified to be a vaccinated case, 35 to be unvaccinated, and in 14 cases the medical certificates did not furnish any information as to vaccination. Disregarding the 'not stated' cases, it appears that only *one* death from small-pox occurred among the 317,081 *vaccinated* children living in London between one and five years of age: whereas, 35 deaths from this disease were recorded among the 31,360 unvaccinated children at the same ages. Thus, in equal numbers living, 372 deaths from small pox occurred among unvaccinated to one death from the same cause among vaccinated children at

* A house to house visitation was commenced soon after the above paragraph was written, and the Vaccination Officer reported the results as follow:—"Three hundred streets and places were visited, numbering 7,998 houses inhabited by 21,000 separate families, resulting in a discovery of 290 unvaccinated children born in all parts of the Kingdom, and some on the Continent. . . . Several born in this parish were not registered, others never reside at the place of birth registered." Certain parochial schools were also inspected, and 60 unvaccinated children discovered out of a total of 2,089. An application by the Guardians to the School Board for London for permission to inspect the children in "Board Schools," was not acceded to, the Board not seeing their way to concur in the suggestion of the Guardians that the Vaccination Officer be allowed to inspect the children in Board Schools. More than 300 of the 350 children referred to were vaccinated shortly after discovery. All were duly accounted for, and in four cases only were legal proceedings found necessary.

these ages." It may be added that, in a subsequent report, the Registrar-General stated that the one death of a vaccinated child from small pox occurred so soon after vaccination, that the child must have been infected with small pox six days before it was vaccinated.

It only remains in concluding this portion of the report to state a few salient particulars bearing on the rise and fall of the epidemic, and the deaths due to it.

The total number of cases recorded in my department from 2nd October, 1876, to 30th September, 1877, was 421. Of these 292 occurred in the North, and 129 in the South Sanitary District. The subjoined table shows the monthly number of cases recorded in each district; but it should be mentioned that not a few of the cases were not heard of till they had been completed, so that they really belong to an earlier period in the epidemic than that assigned to them.

No. of Report.	Date of Report.	Cases Re-reported.	Sanitary Districts.		Sent to Hospitals.	Treated at Home.
			North.	South.		
1876. No. 10	1876. Nov. 15	13	12	1	4	9
14	Dec. 13	36	22	14	28	8
15	1877. Jan. 10	40	24	16	30	10
1877. 1	Feb. 7	43	34	9	24	19
2	Mar. 7	26	24	2	15	11
3	April 4	24	22	2	18	6
4	May 2	39	32	7	23	16
5	" 30	43	38	5	29	14
6	June 27	50	28	22	40	10
7	July 25	43	25	18	38	5
8	Aug. 22	39	17	22	32	7
9	Sept. 19	12	7	5	9	3
	Recorded to " 30	13	7	6	5	8
	TOTALS ...	421	292	129	295	126

Two hundred and ninety-five of the cases were removed to the hospitals—nearly all of them to the hospitals under the management of the Metropolitan Asylums Board—while 126 were treated at home. The deaths "at home" in the 12 months from October, 1876, to September, 1877, were 26, while the deaths in the hospitals were 58. The rate of mortality, therefore, at home (in known cases) was 20·6 per cent.; at the hospitals 19·7 per cent. Of the cases in the North 144 were above and 148 below 15 years of age, while in the South District the attacks over 15 years were 109, as against 20 under that age.

The information as to previous vaccination is too vague to be relied on. The disease was known to exist in 86 houses, in 142 streets; viz.: in 164 houses in 72 streets in the North, and 122 houses in 70 streets in the South Sanitary District. Every case was duly visited as soon as it became known, and no effort was spared to effect removal to a hospital whenever necessary.

The houses in which the disease appeared were disinfected—during the latter part of the epidemic by an officer appointed for the purpose—and steps were taken to ensure the proper disinfection of infected wearing apparel, bedding, &c., &c. Two of the contractor's men engaged in this work took the disease, and one of them died. I am not acquainted with a single case in which the disease could be traced to retained infectiveness in rooms, or in clothing, &c., that had been disinfected; and I mention this not only as an evidence of the care and thoroughness with which the work was carried out, but also as a proof of the efficacy of the processes adopted.

It affords me great satisfaction to testify that the Sanitary Inspectors performed their duties in connection with the epidemic, difficult as those duties often were, and dangerous always, with exemplary fidelity.

FEVER.—The subject of "Fever" was much discussed in 1876, owing to a published statement by a well-known parishioner that "typhoid fever was chronic in South Kensington." This statement, unsupported by a single fact, was shown at the time to be erroneous. I think it desirable, nevertheless, in this annual report, to refer again to the subject.

The total deaths from "Fever" in the year were 37, according to the Registrar General—16 below the corrected decennial average. Six of these deaths, all in the "Town" sub-district were returned as *simple continued fever*, and three, in the same district as *typhus fever*. With respect to the last named disease I shall only observe that every year two or three deaths are certified from this cause, but seeing that the cases, notwithstanding the extremely infectious character of the disease, have invariably occurred singly and in separate localities, it may be allowable to question whether the several deaths may not have been due to some other disease assuming a "typhoid" form at the last?

Enteric fever is made accountable for 27 deaths, 25 of them in the "Town" and two only in the "Brompton sub-district." The first of the deaths from Typhoid fever in Brompton occurred in Yeoman's Row, one of the poorest streets in the parish, the victim being a child in the fourth year of his age; and the other in Finborough Road, on the Redcliffe estate, the deceased being described as a "gentleman," 38 years of age. With reference to the latter case, the medical man who attended the

patient informed me that "the disease did not originate in Kensington, but in the patient's place of business;" where, he added, "the drains were very bad." So much for the actual mortality from "fever" in Brompton (which includes South Kensington) with its population of 38,000 souls. The deaths in the Town sub-district were 25 in number nominally, but several of the cases were proved to have originated outside the parish, or to have been imported; while others, which were incorrectly returned by the Registrar General as enteric fever, owing doubtless to some indefiniteness in the medical certificates of the cause of death, were stated by the medical men in attendance not to have been cases of Typhoid fever at all. Eight of the 27 deaths occurred below the age of 5 years, and 6 between 5 and 17 years of age, the ages at death in the remaining cases ranging between 21 and 67. The actual number of deaths registered from Typhoid fever in 1875, was 21, equal to 1·4 deaths to 10,000 persons living, the rate in London being 2·4 per 10,000. The deaths were equivalent to 7·5 in every 1,000 deaths in the parish, and to 10·3 in the Metropolis as a whole. In 1876 the nominal figures were not quite so favourable to the parish, for the deaths in Kensington and London respectively were 1·8 and 2·2 per 10,000 persons living, and 9·3 and 10 in every 1,000 deaths. But if the deaths that were really not due to Typhoid fever at all be deducted, the figures present a much more favourable complexion, and still more would this be the case if the deaths that were imported were subtracted. It may be added that some of the deaths were due to sanitary defects—two of them, especially, connected with interior iron soil-pipes, of which it was impossible my department could have any knowledge without previous information, and which were at once removed when the houses were inspected on revelation of the disease by the registration of death. In another case a gentleman lost his life from standing over his own water-closet while clearing away an obstruction. If all these cases are taken into consideration, the importance of 'fever' mortality is much attenuated; and probably if a similar enquiry were instituted in other parishes, it would lead to similar results.

But to return to the alleged chronic prevalence of typhoid fever in South Kensington, it was stated—after it had been shown that no death from this cause had occurred—that the "disease may be chronic, although it may not terminate in death, and may exist, especially among well-to-do people, although the Medical Officer of Health may be unacquainted with any cases of illness." Within moderate limits the former part of this statement may be admitted to be correct: but inasmuch as the mortality from typhoid fever is one in six cases (not one in twenty as stated), it is obvious that the cases could not be numerous: while as to the latter part of the statement, the accuracy of which is not impugned, it might be

mentioned — (1) that when application was made to the parishioner asking him to "specify the particular houses or streets in which typhoid fever is chronic in South Kensington," he "declined for reasons which must be obvious," to furnish the desired information ; and (2) that with the approval of your Vestry I have on three occasions specially appealed to my medical brethren for information of the occurrence of infectious diseases, so that if we are without such information as we should possess, it is not for want of effort to obtain it. I am free, indeed, to confess that we obtain little information of non-fatal infectious diseases among the well-to-do classes (the exceptional instances being those in which our sanitary assistance is sought) nor do I expect any material difference in this respect, until such time as we shall have an official registration of diseases or a legislative enactment for the compulsory disclosure to the sanitary authority of infectious diseases — a measure, the necessity of which I have constantly advocated.

As regards *fatal* cases of infectious disease, it may not be out of place to remark that your Vestry were the first in London to take measures to obtain immediate information of deaths, by entering into a special arrangement with the sub-district Registrars: so that during my term of office every such case has been reported to me within a few hours after registration of death. And as it has been sought to affix a stigma of special unhealthiness on one of the most attractive and salubrious localities in all London: it may be permissible to state that whereas the Metropolitan death-rate last year was 22.3 per 1,000, and that of Kensington generally (including the deaths of non-parishioners in the Consumption Hospital, &c.) 19.5 per 1,000, the rate in the Brompton sub-district (population 38,000) which includes South Kensington, was only 14.9 per 1,000.

I might have concluded here, my notice of a statement beyond question injurious, though wholly unfounded, but that, in the course of the public discussion to which it gave rise, the *Lancet* stated (Aug. 12, 1876, p. 266) that "the zymotic death-rate of the South Kensington district is steadily increasing," and that "a death-rate from zymotic diseases of more than 2 per 1,000 persons living is absurdly high for such a suburb as South Kensington." To this the reply is that the death-rate from zymotic diseases quoted is not that for South Kensington, but for the Brompton registration sub-district; and that in order to form a just notion of the proper or usual death-rate from such diseases in any district, it is necessary to take into the calculation a sufficient number of years. The reason for this is obvious, and was well expressed by the Sanitary Commissioner of the *Lancet* (at page 258) in the same number of that journal. "In attaching importance to an increased death-rate from zymotic diseases during any period, reference" he says, "must be made to prior conditions. A pro-

longed immunity from measles, whooping cough, or scarlet fever, is sooner or later certain to be compensated by an increase proportionately great, because during the years of immunity the population susceptible to such diseases has continued to increase." This principle should have been borne in mind in considering the present case, for though it is true, as stated, that the death rate from zymotic diseases was higher in 1875; and in the *first half* of 1876 than in the year 1874 (with which a comparison was made to the disadvantage of the district,) this higher rate, which still was not above the decennial rate, was caused, as the same writer well puts it, "rather by an increase of population susceptible from prior immunity than from unsanitary conditions" as had been assumed. With a view to a fair and legitimate comparison of the past and present death-rate from zymotic diseases in the Brompton district, the following table has been drawn up, showing the death-rate per 1,000 persons living from the seven principal diseases during the ten years 1865-74 :—

1865	1866	1867	1868	1869	1870	1871	1872	1873	1874
3.0	1.6	2.2	3.1	2.6	3.9	2.2	2.2	1.6	1.6

or an average of 2.4 per 1,000.

The death-rate in 1875 was an average one of 2.4 per 1,000 and the rate in 1876 up to the time of the discussion, was 2.5 per 1,000, or .1 above the average, though far below the maximum 3.9. But observe what followed. The deaths from these diseases which in the first 33 weeks of 1876, were equivalent to 2.5 per 1,000 persons living were for the whole year equivalent to only 1.7 per 1,000, or .7 below the decennial average. In the last nineteen weeks of 1876 there were only four deaths from the principal zymotic diseases in a population of 38,000: and the figures during the current year are not less favourable. Moreover, if we take the 12 years 1865-76, and divide them into two equal periods (the latter period corresponding to my tenure of office), it appears that the death-rate from zymotic diseases in the first six years was 2.73 per 1,000, and in the latter six years only 1.96. The error in the statement that "the zymotic death-rate of the South Kensington district is steadily increasing," arose from comparing the mortality in average years (1875 and first half of 1876) with that of an exceptionally low year, 1874. But it was further stated that the zymotic death rate was too high for such a suburb as South Kensington—a statement I could only meet by a comparison which might naturally appear invidious; but having calculated the death rate in 1875 from these diseases in all Kensington, in the Brompton sub-district, including South Kensington, and in the other parishes comprised in the Registrar

General's "West Districts of London," and having compared these with one another and with the Metropolitan rate, I came to the conclusion that the *Lancet* writer's conclusions were not borne out. But I will let the figures speak for themselves.

Death-rate from seven principal zymotic diseases, 1875:—

Parish of Paddington	2·8	per 1,000
Parishes of Fulham and Hammersmith	5·2	"
Parish of Chelsea	4·2	"
„ St. George, Hanover Square	2·4	"
Parishes of St. Margaret and St. John, Westminster	4·7	"
Westminster Union	2·8	"
Parish of Kensington	2·5	"
Brompton sub-district	2·4	"
All London	3·9	"

I do not wish to attach too great importance to the above figures (and I have already entered a protest against deductions drawn from insufficient data), but I think they may be taken with others to show that South Kensington is not open to the reproach levelled against it.

I need perhaps have added nothing to prove the inutility of taking gross numbers, in short periods, with a view to reliable deductions from vital statistics; but the following figures so eloquently point out the fallacy which may arise from so doing, that I shall not weaken them by comment.

Total number of deaths registered from the seven principal diseases of the zymotic class in Kensington for three half-years ended:—

June 30, 1876.	December 31, 1876.	June 30, 1877.
312	189	91

Annual death-rate per 1000 persons living from these diseases in the half-years ended:—

June 30, 1876.	December 31, 1876.	June 30, 1877.
4·2	2·4	1·2

Before concluding these observations, it may be remarked that in the controversy, it having been assumed by the parishioner, that sewer gas from defective drainage is the only cause of Typhoid Fever, I stated my opinion that an equally fruitful source of sewer gas poisoning is the absence of ventilation in drains otherwise well planned. The prevalent custom, moreover, of connecting

water cisterns with sewers through the medium of "waste pipes" so called; and the dirty neglected state into which cisterns are allowed to fall, sometimes through forgetfulness, perhaps, but often because they are practically inaccessible, are dangerous nuisances, fruitful sources of disease, on which I have on various occasions addressed warnings to every householder in Kensington. I have already alluded to the fact that many cases of typhoid fever are imported, and should not, therefore, be reckoned in any estimate of the sanitary condition of the parish, as judged by the prevalence of this malady, and I have mentioned an error into which the Registrar General is liable to fall, of overstating the deaths from typhoid fever, through want of clearness in medical certificates of the cause of death. It may be added that there is reason to believe that error has crept into his invaluable "returns" from the loose use of the term "typhoid," which is often used to express a set of symptoms, rather than the specific disease "Enteric fever,"—as when towards the close of a lingering illness, *e.g.* pneumonia, the case assumes a *typhoid* character, which does not mean that the patient had *Enteric fever*, though from the wording of the certificate this might naturally be assumed to be the case. The following tables are reprinted from my Special Report (August 23rd, 1876,) on the "Alleged Chronic prevalence of Typhoid fever in South Kensington."

Deaths from "Fever" in 1875-6.—Brompton Sub-district.

Date.	Sex.	Age.	Description.	Terms of Certificate.	Place of Death.	Remarks.
1875						
Jan. 14	M.	44	Carman.	Fever, Hemorrhage, Exhaustion.	Ilfeld Road.	Classed as simple continued fever.
March 15	M.	29	Butler.	Pneumonia of right lung with typhoid fever, 15 days.	Richmond Road.	
June 2	M.	77	Gentleman.	Typhoid fever, Congestion of the lungs.	Thistle Grove.	
June 4	M.	59	Gentleman.	Typhoid, 4 weeks, Pneumonia, Exhaustion.	Redcliffe Road.	
June 13	F.	59	Wife of a Painter.	Typhoid fever. Pleuro-pneumonia.	Yeoman's Row.	Classed as simple continued fever.
June 16	F.	23	Domestic Servant.*	Enteric fever, Congestion of the lungs.	Consumption Hospital.	
July 28	M.	71	Gentleman.	Typhoid fever.	Seymour Place, Fulham Road.	
Sept. 19	F.	27	Gentleman.	Typhoid fever, 20 days, Perforation of bowel, 24 hrs.	Thurloe Place.	
Dec. 3	F.	47	Wife of a labourer.	Typhoid fever, 14 days, Congestion of lungs.	Ilfeld Road.	
Dec. 5.	F.	18	Wife of an Ironmonger.	Gastric fever, 10 days.	Clairville Grove.	
1876.						
July 6	M.	3½	Son of a Labourer.	Typhoid fever, Perforation of bowel, collapse.	Yeoman's Row.	
Aug. 24	M.	38	Gentleman.	Typhoid, 3 weeks, uræmia †	Finborough Road.	

* An out-patient at the Hospital, from Penge, admitted because found to be suffering from typhoid fever.

† Disease originated at deceased's place of business, not in Kennington.

*Deaths from the Seven principal Diseases of the Zymotic class in the Brompton Registration
Sub-district in the Twelve Years—1865-76.*

The Year.	Small pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping Cough.	Typhus Fever.	Typhoid Fever.	Simple continued Fever.	Diarrhoea	Total Deaths.	Deaths per 1,000 living.
1865	1	13	11	—	1	—	18†	—	24	68	3.0
1866	1	6	5	—	11	—	2	—	14	39	1.6
1867	11	2	6	—	13	—	9	—	15	56	2.2
1868	1	8	33	7	5	—	8	—	18	80	3.1
1869	4	2	22	1	7	—	15	—	20	71	2.6
1870	1	11	45	5	10	2	9	3	23	109	3.9
1871	9	4	7	2	7	2	8	2	23	64	2.2
1872	1	15	7	2	8	—	8	—	26	67	2.2
1873	—	10	2	3	7	—	8	—	24	54	1.6
1874	—	6	4	2	9	—	9	4	22	56	1.6
1875	—	11	25	8	20	—	9	2	12	87	2.4
1876	—	16	17	4	10	—	2	—	16	65	1.7

• First year of separate registration (1868)

† Registered generally as "Fever" until the year 1870.

POPULATION.

The population of Kensington estimated to the middle of the year, was 148,000, the increase of 4,500 being partly due to an excess of births over deaths (1,604); the larger portion, however, resulting from immigration (2,896). The "Town" sub-district contained in round numbers 110,000 persons, and Brompton 38,000. The males numbered 60,250; the females, 87,750—excess of females over males 27,500. The subjoined table shows the relative numbers of persons of each sex at the census of 1871, arranged in groups according to age:—

AGES OF MALES AND FEMALES, 1871.

All Ages.	Under 5	5 to 15	15 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 to 75	75 to 85	85 to 95	95 and upwds.
Males, 49977	7065	10198	8948	8317	5963	4339	2464	1370	373	33	2
Females 71322	7147	11527	16585	14203	9080	6241	3768	2000	687	97	7
Total, 120299	14212	21722	25533	22520	15043	10580	6232	3270	1045	130	9

In former reports I have referred to the probable causes of the excessive preponderance of females in our population, and ascribed it to (1) the large number of female domestic servants always met with in a wealthy district; (2) the numerous schools for girls; (3) the popularity of Kensington as a place of residence, and (4) the superior longevity of women. The density of the population was about 67 to an acre, making no allowance for uncovered ground, the extent of which I am not in a position to estimate with accuracy; but independently of the cemeteries, at Brompton and Kensal Green; and Holland Park, the outskirts of which are slowly coming into the builders' hands, there are still many acres available for building purposes. Not very many years probably will pass, however, ere Kensington will be completely built, and then, with a population stationary within narrow limits, vital statistics will be capable of a more definite handling than is possible now when, year by year, there is a large increase, the amount of which is to some extent matter of conjecture, although as I have before observed, I believe the estimate to be not very wide of the truth. The basis of the estimate of population is the number of inhabited houses, and the known average number of persons to a house at the census. In July, 1876, there were 18,944 inhabited dwellings—an increase of 504 upon the number at the corresponding period in the preceding year. Of this total a not insignificant proportion would be stables having inhabited rooms, and situated in mews. (The number of mews is about 150.)

At the census, 1871, the number of persons on an average in each house was 7·8. The density was somewhat greater in the Town sub-district, and only 7 per house in Brompton.

The subjoined table exhibits at a glance some of the evidences of the growth of Kensington within the present century :—

The Year.	Population.	Rateable value of Property.	The Year.
1801	8,556	£75,916	1823
1821	14,428	93,897	1833
1841	26,834	142,772	1843
1851	44,053	257,103	1853
1861	70,108	375,333	1860
1871	120,299	590,711	1865
1876	148,000	817,326	1874-1870
1877 (July)	151,500	1,345,806 (October)	1877

MARRIAGES.

The number of marriages celebrated in 1876 was 1,417, viz. :—

In the Church	1,211
At Nonconformist Chapels	46
At Roman Catholic „	65
At the Superintendent Registrar's Office	95

Total 1417

The marriage rate (*i.e.*, number of persons married to 1,000 population) was 19. The rate in England and Wales in 1874 was 17·1 and in 1875, 16·8. The number of marriages in Kensington in 1875 was 1,346; in 1874, 1,311; in 1873, 1,241; in 1872 1,122; in 1871, 1,131.

BIRTHS.

Four thousand five hundred births (*viz.*, 2,271 males and 2,229 females), 3,667 in the Town sub-district, and 833 in Brompton were registered. The birth-rate in the entire parish was 32·9, (increase over 1855, 1·7) to 1,000 persons living; 33·3 in the Town sub-district, 21·9 in Brompton. The decennial birth-rate in Kensington (1866-75) was 31·8 per 1,000. The Metropolitan rate last year was 36·5. The relative proportions of the sexes born were 101·8 males to 100 females: the male births forming 50·4 and the females 49·6 per cent. of the total number. The low birth-rate in Kensington, and particularly in the Brompton sub-district, is obviously due to the disproportion in the relative number of the sexes, and to the excess of (unmarried) female population. The illegitimate births *registered* were 186, equal to 3·3 per cent. on total births: 78 of these took place at the parish workhouse, which is within the Town sub-district, and where 105 children (including five still births) were born. The legitimate births in the workhouse were 24, and three children were born of widows. Only 11 illegitimate births were registered in Brompton.

The subjoined table shows the quarterly number of births of each sex registered in each sub-district :—

	KENSINGTON TOWN Sub-District.			BROMPTON Sub-District.			Grand Total.
	Males.	Females.	Total.	Males.	Females.	Total.	
1st Quarter	529	447	976	94	135	229	1205
2nd „	413	427	840	118	98	216	1056
3rd „	470	480	950	102	98	200	1150
4th „	457	444	901	88	100	188	1089
Total -	1869	1798	3667	402	431	833	4500

DEATHS.

Two thousand eight hundred and ninety-six deaths were registered in 1876, viz., 2,276 in the Town sub-district and 620 in Brompton. The deaths in the "Town" include 225 registered at the Parish Infirmary and Workhouse, and 36 that took place at St. Joseph's House, Notting Hill, while the Brompton total includes 113 at the Consumption Hospital. After deducting the deaths of non-parishioners at the last-named institution, and distributing those that occurred at the workhouse, the deaths in the Town sub-district were 2,219, and in Brompton 568. These numbers are equal to a death rate for the whole parish of 18·6 per 1,000. But, as before stated, the deaths at the Brompton Hospital are left in the statistical tables to compensate for the deaths of parishioners in hospitals and at other places beyond the limits of Kensington, and these deaths raise the rate to 19·5 per 1,000. The rate in the Town sub-district was 20·2, and in Brompton only 14·9 per 1,000. Fourteen hundred and eighty-seven males died in an estimated population of 60,250 = 24·6 per 1,000 persons living, or one death to 40·5 persons living. Only 1,409 females died in an estimated population of 87,750, the death-rate being 16 per 1000, or one death to 62·2 persons living. Compared with 1875 the deaths of males show an increase of 137, and those of females a decrease of 27. The deaths under one year of age were 771, the increase of 95 on the number in 1875, being due to the prevalence of infantile diseases of the zymotic class. These deaths were equivalent to 26·6 per cent. on total deaths, and to 17·1 per cent. on the births registered. The corresponding per centages in all London were 25·7 and 15·7 respectively. The deaths under five years of age, 1,305, were equal to 29·4 per cent. on registered births (London rate 26·9), and to 45·5 per cent. on total deaths (London 42·7). Six hundred and one persons died at 60 years of age and upwards. This number is 41 less than in 1875, and is equivalent to 20·7 on the total deaths, the equivalent per centage in all London being 20.

The deaths of illegitimate children under five years of age, as registered, were 93 (viz., 88 in the Town sub-district and five in Brompton), equal to 3·3 per cent. on total deaths, and to 50 per cent. on the registered illegitimate births,

The subjoined table shows the quarterly number of deaths of each sex registered in each sub-district :—

	KENSINGTON TOWN Sub-District.			BROMPTON Sub-District.			Grand Total.
	Males.	Females.	Total.	Males.	Females.	Total.	
1st Quarter	309	348	657	96	80	176	833
2nd "	326	273	599	83	82	165	764
3rd "	295	265	560	82	52	134	694
4th "	224	236	460	72	73	145	605
Total -	1154	1122	2276	333	287	620	2896

The subjoined table shows the death-rate in 13 periods of four weeks, corresponding to my monthly reports, and the average temperature of the air :—

Date of Report.		Death-rate per 1,000 living.	Mean Temperature of the air.
Five weeks ended Feb.	5, 1876.	23·8	37·3
Four "	March 4	22·5	41·9
" "	April 1	22·2	40·6
" "	" 29	22·0	47·4
" "	May 27	20·7	48·0
" "	June 24	21·2	57·3
" "	July 22	20·3	66·1
" "	Aug. 19	21·2	65·8
" "	Sept. 16	14·0	54·9
" "	Oct. 14	14·9	56·4
" "	Nov. 11	17·9	45·6
" "	Dec. 13	15·2	46·8
Three "	" 31	16·5	41·9
Average	-	19·4	50·0

SPECIAL CAUSES OF DEATH.

ZYMOTIC DISEASES.—As already stated, the year 1876 was characterised by the prevalence of certain of the diseases of the zymotic class, viz., small pox, measles, and whooping cough, in an epidemic form, the result being that the deaths from the seven principal diseases rose from 372 in 1875 to 498 in 1876 (increase 126); and the proportion of deaths from 133 to 172 in every 1,000 deaths. The zymotic death-rate was 3·3 per 1,000 persons living

(decennial average 3·2), an increase over the rate in 1875 (2·5) of ·8. The rate in all London last year was 3·6 per 1,000^{living}, and 162 deaths in every 1,000 deaths. The deaths occurred in the registration sub-districts in the subjoined proportions :—

	Town.	Brompton.	Total.	Deaths, per 1,000 deaths.
Small Pox ...	8	0	8	2.7
Measles ...	112	16	128	44.3
Scarlet Fever...	42	17	59	20.4
Diphtheria ...	13	4	17	5.8
Whooping Cough	114	10	124	42.9
Fever ...	34	2	36	12.4
Diarrhoea ...	110	16	126	43.5
Total -	433	65	498	172.0

It will thus be seen that while the deaths in Brompton fell from 87 to 65, the number in the Town sub-district rose from 285 to 433.

Of the total deaths no fewer than 309 took place in the first half of the year, and only 189 (including 107 from diarrhoea,) in the second half, viz. :—

Disease.	First half of the Year.	Second half of the Year.
Small Pox ...	1	7
Measles ...	110	18
Scarlet Fever ...	44	15
Diphtheria ...	10	7
Whooping Cough ...	109	15
"Fever" ...	16	20
Diarrhoea ...	19	107
	309	189

Small Pox.—The eight deaths from this disease were registered in the Town sub-district, one each in the first and third quarters and six in the fourth quarter.

Measles was fatal to 128 children, viz., 112 in the Town sub-district, and 16 in Brompton: the quarterly number of deaths being, respectively, 31, 79, 17 and 1; 110 in the first half of the year, during which (as also in the latter part of 1875), the malady-raged epidemically. In the fourth quarter of last year there was but one death from this disease, and, I may add, the mortality from it has since been very low. The corrected decennial average number of deaths from measles is 65.

Scarlet Fever.—The 59 deaths from this disease, 42 in the Town sub-district and 17 in Brompton, show a decline of 24 from the

number in 1875 (83), and they were 37 below the corrected decennial average. Forty-four of the deaths were registered in the first half of the year, and 15 in the second.

Diphtheria was the cause of 17 deaths: 13 in the Town sub-district, and 4 in Brompton; 6, 4, 5, and 2 deaths in the four quarters respectively. These deaths were 6 below the number in 1875.

Whooping Cough.—One hundred and twenty-four deaths from this disease were registered, viz., 114 in the Town sub-district, and 10 in Brompton. The disease was severely epidemic in the first half of the year when the deaths registered were 109, only 15 deaths having been registered in the second half. The corrected decennial average number of deaths from whooping cough is 74.

"*Fever*."—The deaths from the three separate diseases classed under this heading by the Registrar General were 37; 8 above the number registered in 1875 and 16 below the corrected decennial average.

Typhus Fever was the cause of 3 deaths, in as many houses.

Enteric Fever is made accountable for 26 deaths, 24 of them in the Town sub-district. The quarterly numbers of the deaths were 8, 2, 6, and 10.

Simple continued Fever.—The six deaths from this disease were registered in the Town sub-district.

Diarrhœa.—The deaths from this malady were 126; or 18 below the corrected decennial average, viz., 110 in the Town sub-district and 16 in Brompton. The prevalence of diarrhœa as a fatal disease in young children is determined by a high temperature of the air. The deaths are always few in the winter quarters, and last year they numbered only 20 in these quarters, 10 in each. The relative proportion of the deaths in the summer quarters depends on the degree of heat. In 1876 the season was backward, and we had little "summer" before July; and thus it happened that only 9 deaths occurred from diarrhœa in the second quarter of the year. Then followed many weeks of brilliant hot weather which was attended with a large increase in the mortality from this disease, the deaths registered being no fewer than 97. Of the total deaths from diarrhœa, 91 occurred in the first year of life, and fifteen in the second. One hundred and nine of the deaths took place below the age of five years, and 13 at ages above 55, six of them between the ages of 75 and 85.

Simple Cholera.—Six deaths in the Town sub-district were registered, nearly all of them in the practice of one gentleman. I have no sufficient reason for supposing that the cases differed materially from other cases of acute and somewhat rapidly fatal diarrhœa.

OTHER ZYMOTIC DISEASES.—*Croup* was the cause of 13 deaths, 11 of them under 5 years of age, only 2 of them in the Brompton sub-district. Nine of the deaths took place in the first half of the year.

Erysipelas was the cause of 15 deaths in the Town sub-district, six of them below the age of 5 years. The deaths from this disease in 1875 were 22.

Puerperal Fever (Metria) was the registered cause of only six deaths last year, a considerable reduction on the numbers recorded in preceding years. Four of the deaths occurred in the Town sub-district. Two deaths took place between the ages 15—25 years; three between 25—35, and one between 35—45. Fifteen deaths were ascribed to the accidents and ordinary diseases incident to *Childbirth*; 14 of them in the Town sub-district. Thus the total deaths connected, by registration, with the puerperal state were 21 or .4 per 1,000 registered births.

Rheumatism was the cause of 19 deaths, 15 in the Town sub-district. Fourteen of the deaths occurred in the first half of the year. Many of these deaths were immediately due to heart disease, arising in the course of an acute attack of rheumatic fever.

ENTHETIC DISEASES.—*Syphilis*, the only fatal disease in this "order" named, was the registered cause of 10 deaths, all in the Town sub-district, and all in children, nine of them in the first year of life.

DIETIC DISEASES.—The principal malady named in this order, *Alcoholism*, was accountable for 8 deaths (6 in the Town sub-district); 3 ascribed to *Delirium tremens*, and 5 to *Intemperance*. If all the disease and all the deaths due to the abuse of alcoholic stimulants could be put on record, the sum total would be very great. Man's ingenuity in the discovery of alcohol is accountable for a large part of the misery of the human race!

Parasitic Diseases.—Eleven deaths were due to *Thrush*: (9 in the Town sub-district) 8 of them in the first year of life, 2 in the second.

CONSTITUTIONAL DISEASES.

Five hundred and sixty-three deaths were ascribed to the diseases in this great class, which includes two orders (1) Diathetic, and (2) Tubercular. One hundred of these deaths were registered in the Brompton sub-district.

ORDER 1. Diathetic.—The deaths from the maladies comprised in this order, 91 in number, viz., 72 in the Town sub-district, and 19 in Brompton were, *Gout*, 4, *Dropsy*, 13, *Cancer*, 69, and *Mortification*, 5. Of the 69 deaths attributed to *Cancer*, 51 were regis-

tered in the Town sub-district and 18 in Brompton, and they occurred in the four quarters respectively as follows:—24, 18, 18, and 9. The great majority of these cases occur late in life. Between 15 and 45 years of age, there were 12 deaths; 45 to 55, 12; 55 to 65, 26, and 9 at ages above 65. The parts principally affected by this disease or constitutional taint, are the viscera or internal organs: very commonly the uterus in females.

ORDER 2. *Tubercular*.—The diseases in this important order were the registered causes of 472 deaths, viz., 391 in the Town sub-district, and 81 in Brompton. The deaths occurred in the four quarters respectively in the following numbers:—121, 128, 128, and 95—216 in the winter, and 256 in the summer quarters. Some little care has been required in locating the deaths as registered under the correct headings, it being for example not uncommon to find “phthisis” returned as the cause of death in the earliest infancy, whereas it is well known that scrofulous disease as a rule manifests its presence in other parts and organs than the lungs at this early stage of existence. Such cases, therefore, have been grouped under the head *Scrofula* and *Tuberculosis*: the deaths from which were 50 (41 in the Town sub-district and 9 in Brompton). *Tabes mesenterica*, consumption of the bowels, as it is sometimes popularly called, was the cause of 50 deaths (46 in the Town sub-district). Of the 100 deaths due to these varieties of tubercular disease, 41 occurred in the first year of life, and 27 in the second year. *Hydrocephalus* (water on the brain,) and *Tubercular meningitis* caused 79 deaths, 66 in the Town sub-district and 13 in Brompton. *Phthisis* was returned in 293 cases irrespective of the Brompton Consumption Hospital, the subject of remark elsewhere. Of these 293 deaths, 238 were registered in the Town sub-district, and 55 in Brompton. The quarterly numbers were 79, 79, 72, and 63 respectively. Eight of the deaths took place in persons below 15 years of age; between 15 and 25 there were 52 deaths; 25 to 35, 93; 35 to 45, 59; 45 to 55, 54; 55 to 65, 22; and 5 above 65.

LOCAL DISEASES.

The diseases grouped in this great class, caused 1,216 deaths, one less than in the previous year.

ORDER 1. NERVOUS SYSTEM.—The diseases of the nervous system were accountable for 287 deaths (number in 1875, 285), viz., 223 in the Town sub-district and 64 in Brompton. *Cephalitis* (inflammation of the substance of the brain) was returned in 15 cases. *Brain Disease* in 80, (8 only in Brompton). *Insanity* was the registered cause of death in two cases, and *Epilepsy* in 9, one of these only taking place in Brompton. The remaining diseases are *Apoplexy* and *Paralysis*, which for the most part belong to the

latter period of life, and *Convulsions*, which is almost exclusively a disease (or a symptom of disease) in infancy. Apoplexy caused 59 deaths, and paralysis 45; of these 104 deaths, 74 belong to the Town sub-district, and 30 to Brompton. Convulsions were fatal to 77 persons, 75 of them below the age of five years, viz., 47 under one year, 21 between 1 and 2, and 7 between 2 and 5 years. Taking the nervous diseases altogether, it appears that the quarterly numbers of deaths were 77, 66, 73, and 71. Apoplexy and Brain disease were about equally fatal in the two halves of the year; but paralysis which caused only 16 deaths in the first half, was fatal in 29 cases in the second half; while convulsions was much more fatal in the first half (48 deaths) than in the second (29 deaths). Apoplexy was returned in 40 cases under 65, and in 14 over that age, whereas the deaths from paralysis occurred in 17 cases only under 65 years, and in 28 over that age.

ORDER 2. ORGANS OF CIRCULATION.—Total deaths 146; 107 in the Town sub-district, and 39 in Brompton, viz., *Pericarditis*, 5, and *Aneurism*, 3 (all in the Town sub-district). *Heart-disease*, 138; 99 and 39 in the Town and Brompton respectively. (The deaths from heart disease as a complication of rheumatic fever are included in class 1, order 1, under the head of Rheumatism.) The deaths from heart-disease, &c., included here, occurred in the several quarters as follows: 45, 33, 34, and 34; twenty took place below 25 years of age, between 25 and 55 there were 35 deaths, and 91 above 55.

ORDER 3. RESPIRATORY ORGANS.—The deaths from the diseases of these organs were 582, viz., 482 in the Town sub-district, and 100 in Brompton. The quarterly numbers were 224, 138, 64, and 156. The deaths due to the several diseases were *Laryngitis and Spasm of the Glottis*, 18, *Bronchitis*, 315, *Pneumonia*, 197, *Asthma*, 13, and "*Lung Disease*" 39. Of the deaths from bronchitis and pneumonia respectively, 138 and 125 occurred below the age of five years, 44 and 66 between 5—55, and 133 and 28 above 55 years. Thus from these two most common diseases of the breathing organs, the deaths were, as usual, most numerous at the earliest and the latest periods of life: of 512 deaths at all ages, 424 having occurred under 5, and above 55, years of age. The deaths from all diseases of these organs were, in accordance with rule, most numerous in the winter quarters, although owing to the mildness of the weather in the fourth quarter the difference was not so marked as usual. Still the deaths in the cold first and fourth quarters of the year exceeded those registered in the summer quarters by 178, the respective numbers being 380 and 202.

ORDER 4. DIGESTIVE ORGANS.—The diseases of the organs principally concerned in the process of food-digestion were fatal

in 118 cases, 90 in the Town sub-district, and 28 in Brompton. At the head of the list stands "*Liver Disease*," as the registered cause of 43 deaths. *Peritonitis* comes next, 13 deaths; then *Enteritis*, 11, *Ulceration of Intestines*, 10, *Stomach diseases*, 2, *Jaundice*, 9, *Ileus*, 6.

ORDER 5. URINARY ORGANS.—The deaths due to the diseases in this order were 57, 41 in the Town sub-district, and 16 in Brompton. Twenty-seven of them were ascribed to *Bright's disease (Nephria)*, and 13 to "*Kidney disease*." *Nephritis* and *Diabetes* were fatal in 6 and 5 cases respectively. *Calculus (stone)* and *Cystitis* in 1 and 5 cases each.

Order 6. ORGANS OF GENERATION.—The diseases of these organs, *Ovarian Dropsy* and *Uterus disease*, were returned in 3 and 7 cases respectively; 10 deaths in all.

Order 7. ORGANS OF LOCOMOTION.—Three deaths were registered from *Arthritis*, and 3 from *Joint disease*.

Order 8. INTEGUMENTARY SYSTEM.—The deaths from diseases of the skin were 9, viz., 8 due to *Phlegmon (Abscess)*, and 1 to *Ulcer*.

CLASS 4.—DEVELOPMENTAL DISEASES.

The deaths from the diseases grouped in this class were 336, viz., 285 in the Town Sub-district, and 51 in Brompton.

Order 1. DISEASES OF CHILDREN.—Eighty-one deaths were returned under the several heads following:—*Premature birth*, 38, *Teething*, 34, *Malformations*, 9.

Order 2. DISEASES OF ADULTS.—*Childbirth* was the registered cause of 15 deaths, only one of which occurred in the Brompton Sub-district.

Order 3. DISEASES OF OLD PEOPLE.—*Old Age* was the "cause" of death in 81 persons, 68 in the Town Sub-district, and 13 in Brompton; 42 of these deaths occurred between 75 and 85; 21 between 85 and 95, and 2 above 95 years of age.

Order 4. DISEASES OF NUTRITION.—One hundred and fifty-nine deaths from *Atrophy* and *Debility* were registered; 141 in the Town Sub-district, and 18 in Brompton. Two of these deaths were of old people, and of the remainder 152 occurred in the first year of life. How many of these deaths were really due to diseases such as *scrofula*, *syphilis*, &c., and how many to want of proper food and care, cannot of course, be ascertained; but no inconsiderable proportion of the whole number we may be quite sure.

CLASS 5.—VIOLENT DEATHS.

Forty-five deaths were due to violence, 32 in the Town Sub-district, and 13 in Brompton. *Fractures* and *contusions* head the list, 15 deaths; and *suffocation* comes next, 12 deaths. *Burns* and

scalds, 2; *wounds*, 2; and "*otherwise*," 1, complete the list of deaths due to accident or negligence (32). *Murder or Manslaughter* was the registered cause of two deaths of infants.

SUICIDE by *wounds* (5 deaths), by *poison* (2), by *drowning* (1), and by *hanging* (3), was perpetrated in 11 instances, of which no fewer than 8 occurred in Brompton.

Lastly. The cause of death in nine cases was either *not specified or ill-defined*.

A death was registered from *Hydrophobia* but contrary to the usual practice in such cases, an inquest was not held, the Coroner, in all probability, not having been informed of the case. The deceased, a woman aged 63 years, was bitten by her own little dog three months before her death. Three days before this event, which happened in September, she was about her house, and apparently well. She was attended by an unqualified practitioner until the day before her death, when symptoms appeared that led to a registered medical man being called in, and he certified the cause of death *as registered*. But the little dog was alive and well when the case was investigated some days after the fatal event!

The case of a lady, aged 76, who died in Earl's Terrace from "*senile decay, vomiting from eating decayed salmon and consequent exhaustion*," may be cited as an instance of the danger of using unsound and unwholesome food. This lady, it may be mentioned, died intestate, and having no lawful heirs her estate, valued at £140,000, lapsed to the Crown.

DEATHS IN PUBLIC INSTITUTIONS.

There are numerous minor "*public institutions*" in the parish, but the only institutions calling for notice here, are (1) the Hospital for Consumption and Diseases of the Chest at Brompton, (2) the Parish Infirmary and Workhouse, and (3) St. Joseph's House, Portobello Road, Notting Hill. The latter indeed cannot be called a public institution in the same sense as the other establishments, being a Roman Catholic Home for aged poor persons, most of whom, however, have probably been in residence long enough to acquire the status of parishioners from whatever locality originally received. The Infirmary for the treatment of the sick poor of Marylebone will, ere very long, form an important addition to the list of public institutions, a site for it having been acquired at Notting Hill. The deaths in the Workhouse and the Brompton Hospital were equal to 11·7 per cent. of the total deaths in Kensington, while the deaths in large public institutions in all London, formed 18 per cent. of total deaths.

THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.
—The deaths in this institution were 113, (83 males and 30

females), 27, 31, 31 and 24 in the four quarters respectively : 51 in the winter, and 62 in the summer quarters. Five of the deceased were parishioners ; of the remainder 57 were Londoners, 29 came from suburban counties, and 22 from more distant parts of the country. As usual, phthisis (consumption) was the cause of nearly all the deaths—193 of them being ascribed to this constitutional malady, with some secondary diseases in a few instances. Heart disease was returned in three cases ; “lung disease” in five ; “brain disease” in one, and “tumor” in one. Thirteen of the patients died at ages below 20 ; 44 between 20 and 30 ; 36 between 30 and 40 ; 14 between 40 and 50 ; and 6 between 50 and 60 years of age.

THE PARISH INFIRMARY AND WORKHOUSE.—The deaths in these institutions, which are under the medical charge of Dr. Whitmore, to whose courtesy I am indebted for the subjoined particulars, were 227 in number, viz. : 117 males, and 110 females. The quarterly numbers of deaths were 69, 67, 48, and 43—136 of the deaths, therefore, took place in the first half of the year, when, in all parts of the parish, the mortality was so much higher than in the second half in which the deaths at the Infirmary were only 91. The deaths under one year of age, were 22, viz. : Atrophy or marasmus (15), whooping-cough (2), bronchitis, (2), congenital syphilis (1), premature birth (1), want of breast milk (1). The deaths between 1 and 60 years of age were 109, viz. : Measles, (2), chicken-pox (1), whooping cough (2), erysipelas (2), diarrhoea (3), privation (1), abscess (2), dropsy (1), cancer (1), ulcerative stomatitis (1), caries of spine (2), scrofula (1), enlarged glands (1), phthisis (43), apoplexy (1), epilepsy (1), convulsions (3), brain disease (11), heart disease (2), oedema of larynx (1), bronchitis (7), pneumonia (5), ascites, (1), stricture of rectum, (1), fistula in ano (1), cirrhosis of liver (1), jaundice (1), uræmia (1), kidney disease (2), joint disease (1), ulcer (1), detached placenta (1), phlegmasia dolens (1), puerperal convulsions (1), atrophy (2). The deaths at 60 and upwards were 96, viz. : from 60 to 70, 44 ; from 70 to 80, 34 ; from 80 to 90, 16 One female at 90, and another at 98, died from “old age.” The other registered causes of death were, erysipelas (2), diarrhoea, (7), purpura (2), dropsy (2), cancer (6), senile gangrene (1), caries of spine (1), phthisis (1), apoplexy (2), paralysis (1), insanity (1), brain disease (22), heart disease (5), bronchitis (26), vomiting (1), tonsillitis (1), ascites (4), liver disease (1), joint disease, (1), ulcer (1), old age (8). Two inquests were held : (1) female, 40, verdict, “apoplexy” (cerebral hæmorrhage), no *post mortem* (2), Mule, 61, verdict, “Sudden death, heart disease,” *post mortem*.

ST. JOSEPH'S HOUSE.—The deaths in this institution were 36 in number, 22 males and 14 females. Only one of these deaths took place below the age of 60 years. The causes of death were the

diseases, common to old age, viz., heart diseases in 11 cases ; lung diseases, 7 ; brain diseases, 9 ; liver and kidney, and sundry other diseases, 9.

INQUESTS.

The cause of death in 166 cases was returned by the Coroner (inquests), viz., 132 in the Town sub-district and 34 in Brompton. The cause of death was ascertained in 127 instances by examination after death. The ground for inquiry in 82 cases was the suddenness of the death. In other 43 cases the deceased had been found dead in bed or otherwise. Forty deaths were due to violence, 11 being suicidal, viz., 2 by poisoning with carbolic acid (females aged 19 and 54), pistol shot 2, cut-throat 2, hanging 3, run over by train 1, drowning 1. The violent (accidental) deaths were 29 in number, viz., by suffocation (infants) 9, falls 6, run over 3, crushed (by fall of earth, and by a horse) 2, injuries to head 3, burns 2, choked 1, poisoned by narcotic (how or by whom unknown) one infant of two months, starved 1, (manslaughter), wilful murder 1. Of the remaining 124 cases, with the exception of a few in which the verdict was of a somewhat indefinite character, the deaths were due to visceral diseases ; including 41 cases of brain diseases, (apoplexy, convulsions, epilepsy, &c.) ; lung diseases 20, heart diseases 29, scrofulous diseases 5, stomach and kidney diseases 3 each, spasm of glottis 7, diarrhoea 4, &c. Eighty nine of the deceased were males and 77 females. Sixty-six were infants one year old and under.

Among the cases included under the general headings "sudden" and "found dead," very many were deaths from diseases of the most ordinary type, which any medical man would have recognised. It is fair to infer therefore, that the deceased had been neglected, that no medical man had been called in, although the illnesses must have been attended with symptoms of a more or less serious and painful character. An inquest would have been unnecessary in every such case but for the fact that no medical certificate of the cause of death was forthcoming. I have always felt that the mere return of the cause of death by the jury in the coroner's court scarcely meets the necessities of justice, regarding, as I do, the death of a person at any age from acute maladies like pneumonia, or bronchitis, &c., when there has been no medical attendance, as a *prima facie* evidence of neglect as much calling for a verdict of manslaughter as the distinct refusal of one of the "peculiar people" to call in medical aid in sickness. A Kensington jury has taken this view in one case that occurred during the current year. A boy died from small pox, and the woman in whose charge he had been placed having failed to obtain medical advice a verdict of manslaughter was returned at the inquest held on the body of the child. It is true that the Grand Jury ignored the bill on the graver

count, and that no evidence was tendered on the minor count of misdemeanour, so that the woman escaped any legal penalty for neglect. It cannot be doubted, however, that the moral effect of the course adopted by the jury will be good; and it may be fairly held that similar neglect to call in medical assistance in cases of more ordinary diseases should be regarded in quite as serious a light.

I have only to add that the deaths registered on the information of the coroner were 5·7 per cent. of the total deaths in Kensington, the proportionate per centage in all London being 6·8. The deaths by violence were 1·7 per cent. of all deaths in the parish, and 3·7 per cent. in all London.

DEATHS "NOT CERTIFIED."

There is no sign of diminution in the number of uncertified deaths, *i.e.*, deaths of persons who had been attended in the last illness by unregistered, *i.e.*, unqualified practitioners of medicine. The number in 1876 was 33, (1·1 per cent. on total deaths); twenty-three of them occurred in one man's "practice," and nine in another. Besides these admitted cases there were others in which a registered practitioner was called in at the last gasp with a view to the certificate. It appears to be a not uncommon thing for unqualified practitioners to retain the services of properly qualified men with a direct view to certification. Altogether the present state of the question is highly unsatisfactory, and it will be so until it is made somebody's business to protect the public from imposture. I use this hard word advisedly, because I am satisfied that many persons employ unregistered practitioners in total ignorance of their disqualification. I brought the subject very prominently forward a few months ago, and suggested means for putting an end to an admitted evil, but your Vestry, acting under the advice of the Law Committee, (themselves fully impressed with the gravity of the subject) decided that it would be *ultra vires* to prosecute offenders. It is to be hoped that ere long the duty of prosecuting in such cases will be rendered obligatory on some authority, and I cannot imagine a better authority than that which administers the Sanitary laws, whether it be a vestry, a corporation, or a board of guardians. Cases that have been decided in the High Court of Justice, on appeal, have done much to settle the law of the subject, and have swept away many of the legal cobwebs, with which both stipendiary and unpaid magistrates had obscured it; and there is little difficulty now in obtaining a conviction. A society of qualified medical men, instituted for the purpose, has prosecuted numerous offenders with success; but while we must feel that the members have thereby conferred a great service on the community, it must be admitted that their proceedings expose them to misconstruction. In a matter

moreover, of national importance, as the statistics of uncertified deaths prove this to be, it ought not to be left to individuals to vindicate the law at their own cost. An unregistered practitioner in this parish was successfully proceeded against some time ago, and a mitigated penalty of £5 was imposed. Notice of appeal was given, but the appeal, it need hardly be said, was not prosecuted, while the offender did not intermit his practice for a single day. Many cases of small pox, it may be stated, have been treated in their homes by unqualified men, to the great danger of the public through the spread of the disease. It is noteworthy that many unregistered persons, nearly all indeed, practice with a sham degree of *Medicinæ doctor*, purchased, *in absentia* from an University in the Western Hemisphere which has no legal existence. The cause of death as given in the "certificates" furnished by unregistered practitioners is entered in the death registers and in the Registrar General's weekly returns. The certificates are declared to be "invalid," the sub-district registrars are directed to ignore them, and they write "not certified" in the marginal column; but so long as the giving of such certificates is not forbidden; so long, moreover, as deaths are registered on the information these certificates supply, we need not expect any change in the practice. Your Vestry forwarded my report, containing suggestions for putting a stop to irregular certification to the Registrar General and to the Local Government Board. The Registrar General in his reply naturally observed that it was no part of his duty to prosecute illegal practitioners, while the Local Government Board promised their attention to the subject. But nothing has been done, though it is open to any person under the Police Act to become a common informer, and to initiate proceedings under the Medical Act, 1858. The Apothecaries Act can be enforced only with the consent of the Society, and the penalties imposed go to the Society, while those under the Medical Act go to the Receiver of the Metropolitan Police! The "not certified" deaths in 1876 were ascribed to a variety of diseases, including phthisis, pneumonia, scrofulous affections, measles, erysipelas, &c., and the ages of the deceased ranged from a few hours to three score and ten years.

"NO MEDICAL ATTENDANT"

is the return made in cases where a certificate of the cause of death is not forthcoming. It would be the proper description of all the cases treated of in the last section; for surely it is as irrational to style unqualified men "medical practitioners," as to dub everyone who has picked up a smattering of law with the title of lawyer. The man who pretends to be a lawyer, who takes the title and practices without qualification is very properly punished, and surely an equal measure of severity ought

to be visited on those who tamper with human life, mislead the public, and often inflict the worst injury on unsuspecting people. There were seven deaths last year, in which there had been "no medical attendant," besides those, the causes of which were to some extent explained by the previous knowledge of the deceased by medical practitioners.

METEOROLOGY.

The mean temperature of the air at Greenwich in 1876 was 50°·1 Fahr., or ·8 above the average of 36 years (1840-75). The averages of the four quarters were 39°·8, 51°·7, 61°·8 and 47°. The highest reading by day (84°) occurred in the week ending July 22, and the lowest by night (17°·2) in the first week of the year. The hottest week in the year was that which ended August 19th, mean reading 72, and the coldest that which ended January 15th (30°·7). The mean temperature of the fourth quarter was more than 7° above the mean of the first, and less than 5° below that of the second (or summer) quarter. The influence of these meteorological facts is very conspicuously seen in the vital statistics of the year. The dampness of the atmosphere (*i.e.*, the difference between the dew point temperature and air temperature) was 6·4 (average of 35 years 5·6). The rain fall was 23·9 inches, the average in 36 years being 24·1 inches.

VACCINATION.

Table X (appendix) for which I am indebted to Mr. Shattock, the vaccination officer, presents the usual satisfactory results—more satisfactory indeed than could almost be hoped for, seeing how great is the extent of the parish, and that one officer has sole control of this important business. The figures are their own best commentary, and they prove with what zeal and probably unsurpassed success the vaccination laws are carried out in Kensington. Owing to the prevalence of small pox the facilities for revaccination were increased, and in addition to the usual day-times, arrangements were made at all the stations which afforded working people an opportunity of being re-vaccinated in the evening, of which large numbers availed themselves. The Guardians of the Poor are at the present time (July) taking steps to discover unvaccinated children by a house-to-house visitation.* The necessity for this step is obvious, for it is only since the passing of the last Act in 1871 that compulsory vaccination has been carried out with anything like satisfactory efficiency.

A special difficulty, moreover, has existed in Kensington, owing to the fact that the population has largely increased by immigra-

* Vide foot note, page 31.

tion for many years past, and it is impossible to say how many of these newcomers may have been unvaccinated children. It is to be hoped that some light may be thrown on this question in the course of the house-to-house visitation.

I have taken occasion in former reports to point out the advantages of vaccination and re-vaccination, and shown the general effect of the operation in preventing small-pox: and its influence both in modifying the disease when it occurs, and in controlling the mortality. I do not think it necessary to do more now than refer to the observations contained in previous reports. I may, however, notice some pertinent remarks by the Registrar-General, contained in the "Weekly Return," (No. 23), dated 11th June, 1877, on a subject of much interest: for it is certain that vaccination has been brought into some disrepute by the loose use of terms to which the Registrar-General refers. He says, "the word 'vaccinated' is ambiguous, for it is applied (1) popularly, to the operation of puncturing the skin and inserting vaccine lymph without reference to its effect: and (2) scientifically, to vaccination that induces cow pox. Two words are needed, and the word 'vaccinized' might be used with advantage in the second case, when cow pox is induced, and distinct marks are left. Should the word vaccinized not be used, a child must not be described in the medical certificate as 'vaccinated,' unless it had distinct marks of cow pox before the appearance of the small pox eruption."

These remarks will receive the respectful attention of the medical profession, and it may be hoped that before very long we shall have clearer evidence than heretofore of the fatality of small pox after successful vaccination, which implies a condition of complete alteration or modification of the entire system, very much the same in nature as follows upon small pox:—Cow pox, which is given to man by vaccination, being the small pox of the cow, a mild disease both in the animal and in man. Hence if a certain number of true Jennerian vesicles are not produced a person should not be described as "vaccinized." Vaccination is no trivial operation, and every point connected with it needs to be studied with the utmost care, while the operation itself should be surrounded with all those precautions in selecting the vaccine givers, and in the time and mode of vaccination which Jenner, himself the most careful of vaccinators, deemed essential to secure a successful, *i.e.*, a protective result.

LICENSED SLAUGHTER HOUSES.

The licensed slaughter houses at the present time are 31 in number two less than last year, *viz.*, 21 in the North, and 10 in the South Sanitary District (*vide* Table 11 appendix). No application has as yet been made for a license "to establish the business of a

slaughterer of cattle anew," since the passing of the Act in 1874. On the whole the slaughter houses are better kept than formerly, but considerable diligence in supervision is still necessary. In accordance with the recommendation of the Select Committee of 1873, and under the powers of the Act, they have been made "subject to regulations" that are "uniform," "precise," and (on paper) "stringent." The difficulty, however, is to get the magistrates to see the necessity of enforcing the regulations in the strict sense intended by Parliament, and contemplated by the framers of the bye-laws. The penalties originally proposed for breaches of the bye-laws were reduced by the Metropolitan Board of Works at the instance of the Local Government Board, acting on the advice of the Law Officers of the Crown that, whatever the amount, they could not be mitigated by the Justices; but in no case has the full penalty been imposed for any offence arising within this parish, and generally the fine has been reduced to an extent calculated to bring the bye-laws into disrepute, and to defeat the object of special legislation. Not long since a case of an aggravated character was taken before the Court, and notwithstanding that the offender pleaded guilty, the magistrate on his own view that the summons was not drawn in exact accordance with the terms of the infringed bye-law (it was in his power to make any necessary correction) dismissed the summons, at the same time expressing his sense of the character of the offence, by administering a sharp warning to the defendant! The summons had been drawn out in your Vestry's offices as usual; the customary fee for this service being, as a matter of course, paid into the exchequer of the Court. Proceedings in another case were directed by your Vestry to be taken against the licensees of a slaughter-house for having on their premises the carcase of a diseased sheep dressed as for "food of man." The magistrate dismissed the summons on the statement of the defendants that they intended and had arranged to send the carcase away; but the statement made to your Sanitary Committee, on whose advice the proceedings were instituted, was to the effect that the sheep had been brought in from the park dead, on the morning of the day it was seen by the Committee, and that it was "going away." Notice of the diseased carcase being on the premises, had not been given to the 'local authority,' (i.e., Metropolitan Board of Works) or to the 'cattle inspector of the district,' as required by the 11th bye-law. In a similar case sometime ago, the same magistrate held that the presence of a carcase of a cow which had been taken after death to a slaughter house and there dressed as for food for man, was evidence of intention, and the butcher was fined ten pounds. It may be mentioned that the Metropolitan Board of Works (the "Local Authority,") has not taken any proceedings for offences under the bye-laws in this parish.

LICENSED COWSHEDS.

The licensed cowsheds are 28 in number (*vide* Table XII. in Appendix), viz., 17 in the North, and 11 in the South Sanitary District. They contain about 500 cows: and have been regularly inspected throughout the year. In April, 1877, licenses were granted for five new cowsheds, and in every case the magistrates fixed the maximum number of cows to be kept in each, your Vestry's standard of 800 cubic feet per cow being adopted.

In 1875 I drew attention to the necessity of regulating these establishments (and dairies) by uniform bye-laws: and I pointed out how this important object might be secured, viz., by getting the "Government to pass a short Act, conferring on the Metropolitan Board of Works the same powers in respect of cowsheds that they already possess in respect of slaughter-houses, unless the Board should be of opinion that the third section of the Slaughter Houses (Metropolis) Act, 1874, could be so construed as to include the business of a dairyman." The Board appear to have been of that opinion, and that the business might be regulated as an "offensive trade," and sometime back referred the whole subject to one of their committees. But any such action on the part of the Board, which is open to objection, moreover, will probably prove unnecessary, the Government having shown a willingness to deal with the subject in a more direct manner.* And although the Public Health (Metropolis) Bill, 1877 (clause 69), in which the proposed powers to frame bye laws for this purpose were included, has been withdrawn for the present session, we may reasonably expect that legislation will not be long delayed. It cannot be doubted, as I stated in a recent report, that "the more direct plan of regulating the business of a dairyman and a cowkeeper by bye-laws authorised to be made, with a view to prevent the spread of disease, is to be preferred to that of classing so important a business with 'offensive trades.' The question, moreover, would be but half settled if the dairies were left out of consideration, which would necessarily be the case were the machinery provided by the Slaughter Houses Act put into operation." I am free to confess the satisfaction with which the promise of a great sanitary reform to which I have contributed fills me: and I gratefully acknowledge the support my views have received from your Vestry, and especially from the Sanitary Committee. Whenever the necessary powers are conferred on the "Local Authorities" (*i.e.*, Commissioners of Sewers for the City, and the Board of Works for all London outside the City limits), I venture to believe those bodies will find the task of framing bye-laws not a difficult one, the

* The Board, nevertheless, have resolved to deal with the Cowsheds under the Slaughterhouses Act, that is, provided they can obtain the consent of the Local Government Board, which is necessary before any trade not mentioned in the Act can be declared to be "an offensive trade" within the meaning of the third section.

Society of Medical Officers of Health having drawn up a code (*vide* my Annual Report for 1875, page 41), which has been submitted to the Local Government Board, the "Local Authorities," and the Sanitary Authorities of the Metropolis, and which will probably be found to contain all that is necessary. It is to be hoped, however, that the Board of Works will content themselves with framing the bye-laws, and will leave the execution of them to the Vestries and District Boards, the Sanitary Authorities, and their officers. In the City the same authority will have the duty of framing and of carrying out the bye-laws, being provided with the necessary sanitary staff.

But while the advantages of regulating cowsheds and dairies in Town is undeniable; yet, considering how large a proportion of the milk supply is obtained from the country, it must be confessed that any measure that does not provide for the regulation of the Country Dairies, &c., would be a very imperfect protection to the Metropolis. It will not be forgotten that the milk that was the occasion of the great Marylebone Typhoid Fever endemic a few years ago, was obtained from a dairy many miles distant from Town, the sanitary condition of which was found and acknowledged to be simply shocking. Many similar outbreaks due to insanitary conditions have been placed on record. Only last year I had occasion to investigate a complaint of numerous cases of illness clearly due to an impure milk supply, also from the country, and it was shown that the sanitary arrangements at the farm were defective, and that the water supply, the immediate cause of the mischief was as bad as it well could be.

In connection with the subject of cowsheds may be mentioned an outbreak of Cattle Plague, which took place in 1877. The history of the outbreak is shortly as follows:—On the 17th of April a cow in a shed at Ledbury-mews, Notting-hill, was taken ill, and was removed to a slaughter-house for examination after death, the supposition being that the animal was affected with "lung plague" (pleuro-pneumonia). It was found, however, to be suffering from *rinderpest*, and the outbreak of the disease having been reported to the Veterinary Department of the Privy Council, the shed was declared to be infected, and put under surveillance. Six days afterwards, on the 23rd April, the remaining twelve cows were simultaneously attacked, and were killed at the shed: the carcasses were disinfected, and removed in vans to Whitechapel, there to be reduced to pulp by superheated steam. The premises and the manure were disinfected, and, in all probability, the outbreak would have been an isolated one, but for the unfortunate circumstance that on the opposite side of the mews there was another shed, in which at the time there were 38 cows. The distance between the sheds was too small to permit any sanguine hope that the cattle in the second shed would escape; and, in fact, on

the 25th April three of the cows were taken ill and were slaughtered, the carcasses being removed with the usual precautions. The freedom of the remaining cows from disease was ascertained, and thereupon the whole of them, 35 in number, were killed and dressed in the shed, and sent to the meat market. The hides and offal were disinfected, and conveyed to the boiling house; the manure was disinfected, taken away and buried. The woodwork of both sheds was to some extent destroyed, the buildings were disinfected, and not used again for 30 days. The theory of the origin of the outbreak is as follows:—The cows in the first shed (which was licensed only on the 3rd of April), were brought on 7th April from an old shed in the fields at Notting-hill, where there had been a sale of a much larger number on the 6th; and it is supposed that the infection was carried to the old shed in the clothes of some one or more of the persons engaged in the trade, who viewed the cattle on the 5th, and attended the sale on the following day. The nearest cowshed to that from which the cows were removed is at Willesden, where the plague had already proved very destructive, but as the Willesden shed is about a mile distant from the shed in the fields there is no good reason for believing that the *contagium* was, or could have been carried in the atmosphere. It may be mentioned that the secretion of milk in cows ceases, almost instantly, in the very first stage of this malignant disease.

BAKEHOUSES.

The bakehouses, 117 in number, viz., 66 in the North and 51 in the South Sanitary district have been regularly inspected, and the provisions of the Act relating to them, carried out as fully as possible.

SANITARY WORK.

The sanitary work of the year executed by the inspectors, so far as it is capable of being set out on paper, is stated in Table VI. (Appendix;) and Table VI A, shows the details of same as recorded in my monthly reports. A very large amount of sanitary work, however, *e.g.*, abatement and removal of nuisances, cleansing of dwelling houses, &c., &c., is done through the influence exercised by the inspectors, without any necessity for the formal order of your Vestry. The number of complaints received, and returned in the complaint book was 1,357, of which by far the larger proportion resulted from inspections by the sanitary officials in the ordinary course of duty. The actual number of orders issued for the sanitary amendment of premises, &c., was 1,530, viz., 776 in the North, and 754 in the South Sanitary District.

DUST REMOVAL.

The subject of dust removal has a special interest for us at the present time, your Vestry having now undertaken the work with-

out the intervention of contractors; but the new system is too recent to enable us to speak with confidence of results, though these I am satisfied will be all that the parishioners could desire, provided the work is carried out methodically. I am of opinion that the parish should be mapped out into districts of convenient size, and that a call should be made at every house in each district on a given day. If dust-bins are made proper use of, it will not be found necessary to remove their contents more frequently than once a week. If the weekly call is made, and, whatever the reason, the men are not permitted to take away the refuse, the householder would be exclusively responsible for any inconvenience that might arise. All the arrangements would be dislocated by an attempt to go over the same ground twice in one week in order to attend to "complaints." The statistics that follow relate *exclusively* to the contractors year ended March 25th, during which 4,571 communications with reference to the removal of dust were received, viz., 2,022 from the North and 2549 from the South contract district. The gross numbers in the two preceding years were (1874) 6,000, and (1875) 4,775. The actual complaints of non-removal in 1876 were 85, viz., 34 in the North and 51 in the South. (The numbers in 1874-5 were 1,010 and 223.) The orders issued to the contractors for the removal of dust, principally as the result of inspections, were 9,247. I cannot conclude this part of my report without an expression of satisfaction with the zeal and industry with which Dust Inspector Gaylard has conducted this portion of his duties. To his appointment, which your Vestry made on my request two years ago, I attribute most satisfactory results, and I am glad to know that the experience he has acquired in the Sanitary department has proved of essential service in the organization of the new system.

NON-REMOVAL OF MANURE.

I referred at length to this subject in my last Annual Report; and I recur to it now to urge again a suggestion I then made, viz., that as your Vestry have the power under sec. 95 of 25th and 26th Vic., cap. 102, to collect and remove stable manure, with the consent of the owners thereof, it would be advisable to exercise that power, inasmuch as the addition of the dung, &c., to ashes, &c., would increase the manurial value of the latter, and thus enable your Vestry to obtain a good price for the parish refuse. Many owners of horses would gladly be relieved of the trouble of removing the manure, which is often not inconsiderable at certain seasons of the year. In other cases your Vestry might reasonably insist on the "regulations with respect to the removal of manure, &c., from mews, stables, and other like places," being strictly carried out, viz., by the receptacles being

cleared "three times a week," particularly in warm weather, and in thickly populated localities, or when the mews are close to houses, and especially wherever sunken dung-pits are found. Rather than submit to the inconvenience of carrying out these regulations, which are strictly necessary in a sanitary point of view, many horse-owners would gladly avail themselves of your Vestry's staff: and it might be reasonably expected that the system would in course of time become self-supporting and even remunerative. The number of mews in the parish is 148. In too many of the mews, &c., dung pits are sunk in the ground; and wherever these are found nuisance is sure to arise, not only in the locality, but also in the course of removal. We have had occasion to serve notices for filling up of such receptacles, and for the providing of racks above the surface of the mews. It would be well if this system could be generally introduced; for, although the brick dung pit of ordinary construction is an improvement on the covered pit, it is liable to become a nuisance if neglected, and especially if it is not drained. The iron rack on the other hand admits the air freely, and allows the straw to dry, so that unless the manure is suffered to become rotten in the stable, no unpleasantness is caused by it either in the receptacle, or at the time of removal.

PARLIAMENTARY.

A Bill of considerable importance called the "Public Health (Metropolis) Bill, 1877," was introduced into the House of Commons late in the Session, (1877), and met with great opposition from the Sanitary Authorities of the Metropolis, on various grounds. The mode in which this Bill was introduced, and read a second time even, viz., as a blank sheet of paper, the Bill not having been printed, excited much disapproval as the principle of a measure is usually supposed to be affirmed by its passing a second reading. It was supposed also that the Bill would increase the power of the Local Government in two ways, viz., (1) by giving them extraordinary rights of interference in the event of default by sanitary authorities in the execution of their duties; the Board apparently to be the judge of such default: and (2) by transferring to the Board certain powers originally exercised by the Privy Council and the Home Secretary. To the general surprise, however, it transpired that these latter powers had been transferred to the Board by the Act, by which the Board was constituted in its present state, and known as the Local Government Board Act, (1871). In previous sections of the present report, I have referred to certain clauses of the Bill dealing with hospital accommodation for cases of infectious disease (page 10), and the "bye-laws for the regulation of Dairies and Cowsheds" (page 59), &c. I pass on therefore to notice some other subjects, one of the most important being the power proposed to be conferred on the

Metropolitan Board of Works to make "byelaws as to foundations of houses . . . with a view to the prevention of injury to health." The clause (68) however, does not go nearly far enough, and would have to be considerably extended to make it as useful as it might be.

Sections 13 and 83 give increased powers and facilities for the abatement of nuisances, and would prove useful. Under sections 24 and 28 the local authority would be able to take proceedings for the removal of nuisances from offensive trades, &c., arising without the district. Section 44 makes an "inn" and a "shop" a "public place," in respect of the exposure of a person suffering from an infectious disease; while section 40 enables the local authority to destroy infected clothing, bedding, &c., and to give compensation for the same.

Sections 49 to 55 (omitting 54 which contains new provisions) which have been much objected to, are a re-enactment of clauses in the Diseases Prevention Act, 1855, and were intended to apply, and have hitherto been applied only in the case of imported diseases, such as Cholera. This fact might, with advantage, be made clear. The clauses are capable of amendment. The powers in respect of the interment of the dead and house to house visitation should be extended.

The Bill, as a whole, it may be added, professes to do for the Metropolis what the Public Health Act of 1875 did as regards England generally, viz., consolidate and amend the sanitary law; but it falls short of so ambitious and laudable a purpose. The sanitary clauses of the Metropolis Management Acts, the Slaughter-houses Act, and the Water Acts are altogether omitted. In other words, it omits all reference to offensive trades, to sewerage and drainage, and to water supply. The Bill re-enacts the provisions of the Sanitary Act, 1866, with respect to mortuaries and disinfecting chambers, but it gives no power to local authorities to facilitate the acquisition of sites, although it enables the Local Government Board to direct the local authority to provide and fit up a mortuary. It re-enacts the lodging-house (35th) clause of the same Act, without making provision for uniformity in the bye-laws, so that the local authority of every district might carry out its own views in respect of the proper allowance of cubic space in inhabited rooms, &c., (37th). The Bill, moreover, would deprive sanitary officials of all control over common lodging-houses, (94th). But, inasmuch as consolidation and amendment of sanitary law are much wanted and would prove very useful—while consolidation alone, if comprehensive, would be a great boon to all who are engaged in the sanitary work of the Metropolis; it is to be hoped that in the next session of Parliament a measure divested of the objectionable features of the present Bill will be introduced to do what this Bill professes to, but does not accomplish.

In withdrawing the Bill the president is reported to have said that "if he re-introduced it, it would be his duty to amend the Sanitary Law of the Metropolis more than could be properly done in a mere Consolidation Bill. In withdrawing the present measure, therefore, he did not bind himself to introduce the same Bill next session, although he trusted it would be possible to introduce it in an amended state."

LEGAL PROCEEDINGS.

The cases taken before the Police magistrates were 61 in number, but for the most part they were of an ordinary sort, not calling for comment. One of the most serious matters in connection with judicial proceedings is the loss of time they involve. It is no uncommon thing for your Vestry's officers to spend the whole morning in the police-court, only to find their business postponed at the last. Whatever may have been the case when the present police-court arrangements were settled, they are most inconvenient and unsatisfactory now. Only one half the magistrate's time is occupied at Hammersmith, and he then posts off to Wandsworth to complete his day's work, whatever may be the state of business in the home court. At the very least, the whole day should be devoted to the business coming before the "Hammersmith" police-court, a large district which includes Kensington, a parish that has increased manyfold since the existing districts were settled. A more satisfactory plan would be a division of the district which should assign a court to Kensington. Failing some better arrangement, I am disposed to believe that we ought to take, at least, some portion of our business before the Justices, who frequently hold their court in the Vestry Hall. Some relief of the difficulty might perhaps be obtained by an arrangement with the stipendiary magistrate to take sanitary business (as a rule) at a certain hour on one day in the week. An arrangement of this sort is made in respect of School Board business, which practically monopolises one day in each week.

I have already alluded in other portions of the report to the proceedings taken against a man who neglected to obey a Justices' order for the removal of his children suffering from small-pox. In another similar case we were unsuccessful through a defect in the drawing up of the order addressed to the defendant instead of to a constable. The defendant disobeyed the order, but escaped the penalty of his disobedience owing to the above mentioned error.

VIRGINIA PLACE.—A great scandal arose in the course of the present year, owing to the disgraceful condition of certain houses in this place, known as Devil's Alley. They were inhabited by the lowest class of poor persons, who paid no rent,

and came from all parts of town. The doors and all interior wood fittings had been more or less destroyed and carried off; the water supply had been cut off, and the waterclosets were in a filthy state. I had already reported some months previously that the houses were unfit for human habitation (under Torrens' Act) and your Vestry's surveyor had reported as to the reparations necessary to make them habitable. For a long time no "owner" could be found, and when at last an agent of the owner was found no disposition was shown to repair the houses, and the agent professed his inability to clear out the inhabitants. Proceedings were therefore taken in the police-court and the houses were closed by justice's order; the inhabitants were removed, and the doors and windows were boarded up. The houses cannot be legally re-occupied without a further order of the magistrate, rescinding the former order, and declaring them fit for human habitation.

SANITARY WANTS.

MORTUARY AND DISINFECTING CHAMBER are still among our sanitary wants. In the (withdrawn) Public Health (Metropolis) Bill, 1877, the President of the Local Government Board proposed to take power to enable the Board to compel the erection of mortuaries, but without making any provision to enable local authorities to acquire sites. In this parish, as in others probably, the difficulty of obtaining a suitable site for a mortuary is a real hindrance to the carrying out of the intention of your Vestry; but it is a difficulty which, nevertheless, might be overcome. I am of opinion still, however, that the proper site for a mortuary is the disused burial ground at the rear of the Vestry Hall; and should this site ultimately become available, no doubt an arrangement could be effected for holding inquests in the Vestry Hall, thus avoiding the necessity which now drives the Coroner, the jury, and the witnesses (the latter often in a state of much mental distress) to the public-house.

Although we have no Disinfecting Chamber, I cannot say the poor parishioners have been losers from the want of it, for in every case where infectious disease has occurred, all infected articles have been thoroughly disinfected, cleansed also, and returned in a wholesome condition to the owners. This could not have been done had we simply possessed a disinfecting chamber of whatever construction. The work has been satisfactorily carried out by the firm to which your Vestry have delegated it: but the expense, it need scarcely be added, has been considerable: amounting in the last twelve months (August, 1876, to July, 1877) to the sum of £246 11s. 0d. The number of articles disinfected was 4,114, including 553 beds and mattresses, 1,528 articles of bedding, (sheets, blankets, bolsters, pillows, &c.,) 668 articles of adults and children's clothing, besides carpets, curtains, &c.

In the course of the present year your Vestry have made arrangements whereby every room in which there has been a case of small-pox or other dangerous infectious disorder has been thoroughly disinfected by an officer appointed for the purpose. This excellent system, the only one on which any reliance can be placed, is now in full and satisfactory operation.

BATHS AND WASHHOUSES.

No step was taken last year with a view to putting into operation the Act for providing baths and wash-houses. Considering the great and increasing value of land, the longer the matter is delayed, the less likely the Act is to be adopted, from the growing difficulty of obtaining a suitable site or sites.

WATER SUPPLY.

Impressed with the sanitary importance of the Water Supply question, and believing it to be desirable that the individual members of your Vestry, as the sanitary authority of this great parish, should receive the best information procurable on all points connected therewith, it has been my custom year by year to summarise the report of Professor Frankland, which is drawn up for the Registrar General. Last year, I was able to add some valuable information culled from the monthly reports of Colonel Bolton, R.E., the Water Examiner under the Water Act, 1871. Dr. Frankland's report deals mainly with the quality of the water in its chemical and microscopical aspects, and in relation to its fitness for drinking and for domestic use. It need scarcely be stated that his opinion is adverse as regards the waters obtained (especially) from the Thames, whence our local supply is derived; although as regards the water distributed by one company, the West Middlesex, he allows that it is always clear and bright because well filtered, a standard of excellence in these respects that the other companies will shortly attain, works being in progress having this end in view.

It is with the quantity of water, its condition in bulk at the intakes, and its physical qualities as delivered to consumers, with whatever that relates to filtration, storage, and distribution—the machinery of water supply, therefore, that Colonel Bolton's reports deal; but it should be borne in mind that the Metropolis Water Act, 1871, under which this gentleman holds his appointment, was passed with a view to a system of "constant supply," which as regards the parish of Kensington is practically a dead letter.

I propose, as usual, to present a summary of Dr. Frankland and Colonel Bolton's reports. Dr. Frankland, it will be seen, speaks highly of the water obtained by the Kent Company from the deep wells sunk in the chalk, and which for the sake of comparison

he takes as his standard of purity, and his observations hereon assume greater importance on the present occasion, considered in connection with a scheme which has just been propounded by eminent engineers, under the auspices of the "Water Authority," (*i.e.*, Metropolitan Board of Works), with the object of supplying the Metropolis with potable water from this source.

DR. FRANKLAND reminds us that our water supply is derived from the Thames, the Lea, the "New River," and the deep wells in the chalk. The range of temperature of the river waters is considerable—no less, last year, than 35°·5 Fahr; viz., from 33°·8 in January, to 70°·7 in July and August. Thus they were in danger of freezing in winter; and they were unpleasantly vapid and warm in summer. The deep well water, on the other hand, had a range of only 8°·1 Fahr, viz., from 50° to 58°·1.

The amount of solid impurity in the waters is much the same year by year. It is composed of a variety of substances, most of them harmless when the water is used for dietetic purposes, but injurious when used for washing. The really objectionable part consists of organic matter; and is sometimes dangerous to health. This is almost, if not quite, exclusively found in river waters; and is to a great extent of animal origin. "On the whole the year, 1876, was very favourable for the river waters. Up to the end of November the rainfall was greatly below the average, and in consequence much polluting matter, which would otherwise have been washed into the rivers, was retained nearer to its source. Some months the river waters contained much less organic impurity than usual: indeed in August and October the New River Water was chemically purer than the deep well water of the Kent Company. When, however, the heavy rains of December set in, the accumulated filth of the summer and autumn was swept into the neighbouring streams, the Thames overflowed its banks, washing the manure from cultivated land, and liberating the water from stagnant ponds and ditches. Thus during the last month of the year, the Thames was laden with organic matters of the most objectionable origin, which were carried down to the intakes of the Metropolitan Water Companies: they passed through the filters, and were distributed to consumers. Since January, 1873, the Thames has never been in such a filthy plight, and although most of the water companies drawing from this river have greatly improved their subsidence and filtration plant since that date, no care, foresight, or appliance could convert the 'puddle' (to quote an entry in the books of the West Middlesex Company) which entered the Companies' works, into wholesome potable water fit for dietetic purposes. These uncontrollable and frequently occurring outbreaks render this river a very undesirable source of water for domestic use."

As usual the West Middlesex delivered the best water of the five companies drawing their supply from the Thames.

The deep well water of the Kent Company is distinguished from the other supplies by containing a less proportion of organic matter, and is therefore taken as the standard of comparison in the following table, which shows the amount of organic elements (organic carbon and organic nitrogen) in it, and in the Thames water supplied to this parish :—

Source.		Maximum.	Minimum.	Average.
Deep Wells, Kent	—	1·0	1·0	1·0
West Middlesex	—	6·7	1·8	3·3
Grand Junction	} Thames	7·6	1·9	3·6
Chelsea		7·0	1·9	3·9

The following table exhibits the results of observations as to the degree of efficiency of filtration of Thames water distributed by the Companies :—

Names of Companies.		Number of occasions when clear and transparent.	Number of occasions when slightly turbid.	Number of occasions when turbid.	Number of occasions when very turbid.
West Middlesex	—	12	0	0	0
Grand Junction	—	8	4	0	0
Chelsea	—	7	4	1	0

The West Middlesex Company, it thus appears, supplied water on all occasions, in an efficiently filtered condition; but it is admitted that the filtration of the river water has undergone great and continuous improvement since Professor Frankland first instituted his observations on the subject in 1868. The sediment deposited by turbid water on standing, when examined by the microscope, is almost always found to contain numbers of living and moving organisms. The sub-joined table shows how frequently these organisms have been observed in the water supplied by the local companies :—

Names of Companies.	Number of occasions when moving organisms were found.							
	1869	1870	1871	1872	1873	1874	1875	1876
West Middlesex	0	0	0	0	0	0	0	0
Grand Junction	4	1	1	2	3	5	7	3
Chelsea	3	2	2	3	2	7	4	4

The “hardness” of the Thames water, or the weight of carbonate of lime, or its equivalent of other soap destroying substances, found in 100,000 parts of water, was, on an average 20° or parts in 1875, and 19°·8 or parts in 1876. Large quantities of soap or soda are required to soften the water before it is used for washing. This softening could be accomplished for a small fraction of the expense before the distribution of the water by the use of lime as practised on

similar waters at various places in the Provinces. There is good reason for the belief, however, that soft and moderately hard waters if equally free from deleterious organic substances, are equally wholesome for dietetic purposes.

The subjoined table exhibits the averages for 1876 of solid impurity, and other particulars, the numbers relating to 100,000 parts of each water :—

NAME OF COMPANY.	Temperature in Centigrade Degrees.	Total Solid Impurity.	Organic Carbon.	Organic Nitrogen.	Ammonia.	Nitrogen as Nitrates and Nitrites.	Total Combined Nitrogen.	Previous Sewage or Animal Contamination. (Estimated.)	Chlorine.	Total Hardness.	Proportionate Amount of Organic Elements, that in the Kent Company's Water being taken as 1.
Kent	13.1	40.70	.047	.012	.0	.411	.423	3791	2.36	26.8	1.0
West Middlesex ...	11.8	28.09	.159	.030	.001	.224	.255	1929	1.62	19.8	3.3
Grand Junction ...	10.9	28.53	.170	.033	.001	.229	.263	1979	1.61	20.0	3.6
Chelsea	11.0	28.47	.190	.033	.001	.240	.274	2085	1.64	19.8	3.9

COLONEL BOLTON reports that the intakes of all the local companies are now high up the river at Hampton and Molesey. The West Middlesex Company having large reservoir capacity for subsidence, avoid taking in water during floods; a new filter bed at Barnes has been taken into use. The construction by the Grand Junction Company of further impounding reservoirs for subsidence at the intake at Hampton (so as to avoid the flood waters) is in contemplation, as this company will require such reservoirs before they can deliver effectually filtered water during the period when floods prevail. The Chelsea Company's works at Molesey are rapidly approaching completion. Two out of four new storage reservoirs will shortly be taken into use, and then we may expect that this Company will supply water as little open to objection as that drawn from the river by the West Middlesex Company. With reference to the question of filtration, Colonel Bolton informs us that the rate should not exceed 540 gallons per square yard of filter bed each 24 hours, and at this rate filtration should be effectual.

Colonel Bolton persistently calls attention in his monthly reports to the 14th regulation made under the Metropolis Water Act, 1871, relative to waste-pipes, to which I also have frequently adverted. This regulation, he says, if carried out in its integrity, will prevent contamination of the water from the gases generated by sewage, which are extremely liable to flow back into the cisterns, and become absorbed by the water, unless the overflow pipe is brought outside the house, and the end left exposed to the air, instead of being carried into the drain. The terms of the regulation are as follow :—"No overflow or waste-

pipe, other than a 'warning-pipe,' shall be attached to any cistern supplied with water by the Company, and every such overflow or waste-pipe existing at the time when these regulations came into operation (*i.e.*, in 1872) SHALL be removed, or at the option of the consumer, shall be converted into an efficient 'warning pipe' within two calendar months next after the Company shall have given to the occupier of, or left at the premises in which such cistern is situate, a notice in writing requiring such alteration to be made." I am not quite disposed to agree with the water examiner that the "particular object," if the means by this, the only object, of the above regulation, is to prevent the waste of water; for in that case we might be poisoned with impunity for all the companies would care, provided they were not inconvenienced by any shortness in the supply of water. I have always contended that a very particular object of the regulation was, as Colonel Bolton puts it, "to get rid of the poisonous effluvia and gases from the drains which would otherwise ascend through the waste pipe, and not only be partly absorbed by the water in the cistern, but be partly mixed with the air in the houses, thereby becoming a cause of fever and disease." In such terms, Colonel Bolton, month after month, and year after year, reports to the Local Government Board, which is a sort of Board of Health, but all without effect. In respect of old houses and old fittings, no change is made; the waste-pipes continue undisturbed. The companies hold that "existing fittings" must be deemed to be "approved fittings" under the 35th regulation, and therefore that they have no right to issue, generally, any order to abolish waste-pipes under the 14th regulation. At all events they do not—with one exception. The Chelsea Company took the subject up earnestly, and got the waste-pipes abolished at a time when the scarcity of their water supply rendered economy necessary; and thus they effected a great sanitary improvement at no great cost to individual householders; and without difficulty, it may be added, householders, on a proper explanation being made, recognizing the necessity and advantage in a sanitary point of view of the abolition of the waste-pipes. I entered upon this question, however, so fully in my last annual report, that I shall forbear further remarks now, meanwhile continuing to hope that some means may shortly be found of inducing the companies to put the regulation into force, or of enabling the sanitary authority to do it for them. I entirely concur in the advice Colonel Bolton gives to householders to attend to the fittings and cleanliness of their cisterns, upon which depends in a great measure the purity and abundance of the domestic water supply; and I have been permitted, once again, in the present year to impress the necessity of such attention to cleanliness, &c., by addressing a paper containing information on the subject

to every householder in the parish. The warning is greatly needed, for I am confident much disease is caused through the medium of the water supply: and though the amount of it would be diminished by the universal abolition of the waste pipe that so often connects the interior of the cistern with the house drains and the common sewer, we cannot expect an entire removal of this source of disease, so long as householders remain negligent of the condition of the receptacles themselves.

A NEW SCHEME OF WATER SUPPLY.

The water supply of the Metropolis has received an unusual amount of attention during the current year. On the one hand a Select Committee of the House of Commons, appointed mainly to consider the means at the disposal of the Metropolitan Board of Works for the extinction of fire has reported, recommending that the water system should be consolidated in the hands of a public authority, which, in dealing with the question of constant supply, pressure, and pipage, should be bound to have regard not only to the convenience of consumers, but also to the requirements for the extinction of fire. It is estimated that the purchase of the undertakings of the water companies would involve an outlay of £25,000,000, and that the annual charge on the Metropolis for interest (at $3\frac{1}{2}$ per cent.) on this outlay, and in the outlay for alteration of pipage, and on the cost of hydrants, and on the cost of altered house fittings, together with the increased cost of pumping for higher pressure required by jets; and the cost of management (diminished owing to concentration) would amount to £1,612,250 per annum, equal to about 16½d. in the pound on the present rateable value of the Metropolis, no improvement whatever having for this outlay been made in the quality of the drinking water, and nothing having been attained but a better provision for the extinction of fires. On the other hand a scheme has lately been submitted to the Metropolitan Board of Works by Sir Joseph Bazalgette, Mr. Bramwell, and Mr. Edward Easton, having for its objects a far more adequate provision for the extinction of fire, and an abundant supply of drinking water free from the objections to which the present supply, derived from riparian sources, is open. These gentlemen propose, as the only practicable mode of dealing with the question within limits of expenditure which the ratepayers of the Metropolis would be likely to tolerate, to separate the water for drinking purposes, and for the extinguishment of fire, from the water (supplied by the companies) which is used for all other purposes. They admit the impossibility of changing the sources of supply for all purposes, for they say it is impossible to provide otherwise than as at present 125,000,000 million gallons of water daily, of water

that is unobjectionable ; they consider, however, that it is quite practicable to obtain 30,000,000 million gallons per diem, or even more than that quantity of water, of the best possible quality for dietetic purposes (*i.e.*, drinking and cooking), *viz.*, the pure spring water from wells sunk in the chalk. Estimating the consumption at two gallons per head per diem for these purposes, as a liberal supply they show that it is possible to double that allowance, and to provide in addition an ample supply for fire brigade purposes, which by a system of hydrants could be delivered at great pressure and in abundant quantity so as to be available for the extinguishment of fire in the loftiest buildings without the intervention of fire engines. They would have made on the high ground to the North and South of London reservoirs at a height of 400 feet above ordnance datum, supplied by pumping engines drawing their supply of spring water at distances of from 8 to 15 miles beyond the reservoirs—in the open country—all the reservoirs to be united by large arterial mains traversing London from North to South ; and these mains to be united by subsidiary mains from which a supply pipe would deliver water to an air-tight receptacle, in each house, of a capacity of 3 to 10 gallons, and filled automatically. It is needless to enter into further details of this plan, but it may be stated that for economy and other reasons the mains would be placed under the footways, and that on them at the time they are laid down the hydrants would be placed. The authors of the scheme consider that even if the property of the water companies were acquired by the governing body, this plan is the only feasible one by which the present complaints on the score of bad quality of the water, considered in respect of its potability, and the deficient quantity, &c., and insufficient pressure for fire brigade purposes, could be satisfied. They ask, therefore, apart from all the questions and difficulties connected with the acquisition by the governing body of the property of the water companies—which would be resisted, and would involve years of parliamentary warfare—why should not the plan be at once carried out, leaving the question of the acquisition of the companies for after consideration ? I have thought it right to lay this epitome of an important subject before your Vestry, as it is one of vast importance for ratepayers and sanitary authorities alike. I shall conclude my remarks by stating that the eminent authorities who are responsible for the scheme estimate the cost of carrying it out at £5,500,000, *viz.*, for a separate supply of potable water, under sufficient pressure for extinguishing fires, including the house fittings, and also the hydrants. The annual cost attendant upon such a capital expenditure, and for pumping and cost of management is set down, at £225,000, equal to about 2½d. in the pound on the rateable value of the Metropolis. As

the gross income of the water companies in 1874 was equal to 11½d. in the pound, these sums together would make a charge of 14d. in the pound, or a saving of 2½d. in the pound, close on £225,000, as against 16½d. the cost of purchasing the property of the water companies, without improvement in the quality of the drinking water; but with better provision than at present for the extinction of fire.

GAS.

The subjoined tables are taken from the quarterly reports of the chief gas examiner, and show the results of testings conducted at the station in the Ladbroke Grove, Notting Hill.

1. Maximum, minimum, and average lighting power of the gas in standard sperm candles :—

	Maximum.	Minimum.	Average.
Quarter ended Mar. 31st, 1876	17·6	16·0	16·8
Quarter ended June 30th, 1876	17·7	16·1	16·7
Quarter ended Sept. 30th, 1876	17·8	16·1	16·7
Quarter ended Dec. 31st, 1876	18·4	15·5	16·9
Averages, whole year	17·9	15·9	16·8

The gas which was tested on nearly every week day throughout the year fell short of the standard (16 candles) on two occasions only, viz., October 12th (15·6), and October 13th (15·5 candles).

2. Grains of sulphur in 100 cubic feet of gas :—

	Maximum.	Minimum.	Average.
1st Quarter	17·7	10·0	13·9
2nd „	18·8	10·3	14·30
3rd „	17·9	7·1	13·60
4th „	16·5	11·6	15·4
Averages, whole year ..	17·5	9·7	14·3

The maximum impurity allowed, viz., 25 grains of sulphur in 100 cubic feet of gas, during the winter months, and 20 grains in the summer months was not attained on any occasion. Nor was sulphuretted hydrogen (which is absolutely prohibited) detected at any time. The maximum amount of ammonia impurity which is permitted is 2½ grains in 100 cubic feet of gas. Great care, however, is taken to extract the whole of this valuable product, and on no occasion was there so much as one grain per 100 cubic feet of gas: usually there was none.

The average meter system has now been applied to the public lighting—with what results yet remains to be seen. The parishioners will in any case, however, have the satisfaction of

knowing that the quantity of gas for which they pay is really consumed in the street lamps.

The only complaint connected with gas that came to my knowledge related to a nuisance arising out of the parish, viz., at the works of the Gas Light and Coke Company, formerly belonging to the Imperial Gas Company, and situated in the parish of Fulham. Numerous parishioners complained in the month of October of very offensive smells proceeding from these works, and by desire of your Vestry I investigated the matter, and reported thereon in November, the resident engineer at the works having given me every facility in the course of my enquiry.

Without going into unnecessary and technical details, it may be stated that the cause of the offensive smell was the "lime process" by which gas is purified from excess of sulphur compounds. The "Gas Referees" have prescribed a maximum of impurity to be allowed, and for the winter months this, as before stated, is fixed at 25 grains of sulphur in 100 cubic feet of gas. The required degree of purity cannot be attained, in the present state of chemical knowledge, without the use of lime, and it is said that the lime process cannot be employed without creating nuisance. The nuisance arises when the covers of the purifiers are removed for changing the fouled lime which becomes charged with the sulphur and other compounds, and is very offensive. The principal ingredients in the nuisance are a gas, sulphuretted hydrogen; and a heavy vapour, bisulphide of carbon. The sulphuretted hydrogen is removed by passing the gas through hydrated peroxide of iron; but no practical means are known of dealing with the whole of the bisulphide, some of which therefore is allowed to escape into the open air at the highest point of the works. A less efficient mode of purification than the lime process is that by the oxide of iron. The effect of substituting it for the other would be an increase of about 10 grains of sulphur in the 100 cubic feet of gas. It is a question of evils, no doubt, but I am of opinion it would be better to have more sulphur left in the gas, even to be burnt in our houses, practically, into sulphuric acid, than that the air should be poisoned by so foul a stench—if this were an inevitable result. As the Company have another manufactory at Kensal Green (in this parish), it is right to observe that no complaint had been received from that quarter. The lime process is in partial use there, and the amount of sulphur impurity during the year never exceeded 18 grains in 100 cubic feet. At these works, however, the purifiers are in an enclosed building, the site of the works is elevated, and the supply of gas to the district is supplemented by a 24-inch main from Beckton. The Fulham works on the other hand, lie low, the purifiers, which were being increased

in number at the time of my investigation, are in the open air, and the local manufacture was not supplemented from Beckton, as I understood that it would be ere long. Whether these differences in the circumstances of the two cases were adequate to explain the occurrence of complaint in the one, and the absence of complaint in the other, is a question I did not pretend to decide. But I think the low level of the gas works at Fulham is against them, as the heavy and offensive vapours escape into the air at no great (if any) altitude above the level of the adjoining district within this parish, so that the wind carries them to, rather than above, the houses.

It is a curious fact that about the same time similar complaints were made of nuisance in the neighbourhood of other works belonging to the Gas Light and Coke Company. The Company were anxious to be allowed to dispense with the lime process of purification, and they certainly succeeded in demonstrating its offensiveness. The Gas Referees were firm in insisting on the required degree of purity of the gas *qua* sulphur; and certain sanitary authorities having threatened proceedings against the Company for creating a nuisance, the cause of complaint ceased. The Company, however, brought a Bill into Parliament in the current session with the object of freeing themselves from their responsibilities in respect of the sulphur. It was strongly opposed, and having been referred to a Select Committee the Company were defeated, and withdrew the measure. The regulations of the referees, therefore, continue in force: and I must confess that I do not see any reason for altering them, seeing that, as before stated, the sulphur impurity at the Kensal Green works did not, on any occasion last year attain even the summer maximum, viz., 20 grains in 100 cubic feet of gas. The highest amount recorded was only 18·1 grains, and the average for the year was only 14·3 grains, the minimum being 7·1 grains. No complaint has reached me in connection with these works, and I am unable to explain why the manufacture at other works cannot be conducted with the same success as at Kensal Green. What is done at one place may be done at another; and if a satisfactory result can be attained at Kensal Green where it is found necessary to make only partial use of the lime process, the referees are not likely to reduce the standard of their requirements; while metropolitan authorities will not cease to oppose every attempt to degrade the standard of purity of the gas.

I have only in conclusion to express my satisfaction with the way in which I have been supported throughout the year by the Sanitary Inspectors, who have performed their duties with zeal and efficiency, specially dangerous as those duties have been. The

clerical and much special sanitary work has been ably carried out by Mr. Rudman. Of Dust-Inspector Gaylard's services I have already spoken; and the disinfecting-officer is doing his work well. The Vaccination Officer, Mr. Shattock, and the sub-district Registrars of Births and Deaths (Mr. C. R. Barnes and Mr. Hume), have on all occasions shewn the utmost readiness to afford me every assistance and information in their respective departments—while from several members of the official poor law staff, I have received much valuable help, which I take this opportunity of acknowledging. Lastly, I desire also to express my grateful sense of the manner in which my own efforts in the discharge of the duties of my office have been appreciated and supported by your Vestry.

I am, Gentlemen,

Your obedient Servant,

T. ORME DUDFIELD, M.D.,

Medical Officer of Health.

TO THE VESTRY OF KENSINGTON,

October, 1877.



APPENDIX.

NOTE.—The forms for Tables I.—VI. have been settled by
the Society of Medical Officers of Health to ensure
uniformity of Statistical returns.

TABLE II.

Showing Birth and Death Rate : Deaths of Children, and Deaths in Public Institutions 1876, and 10 previous years.

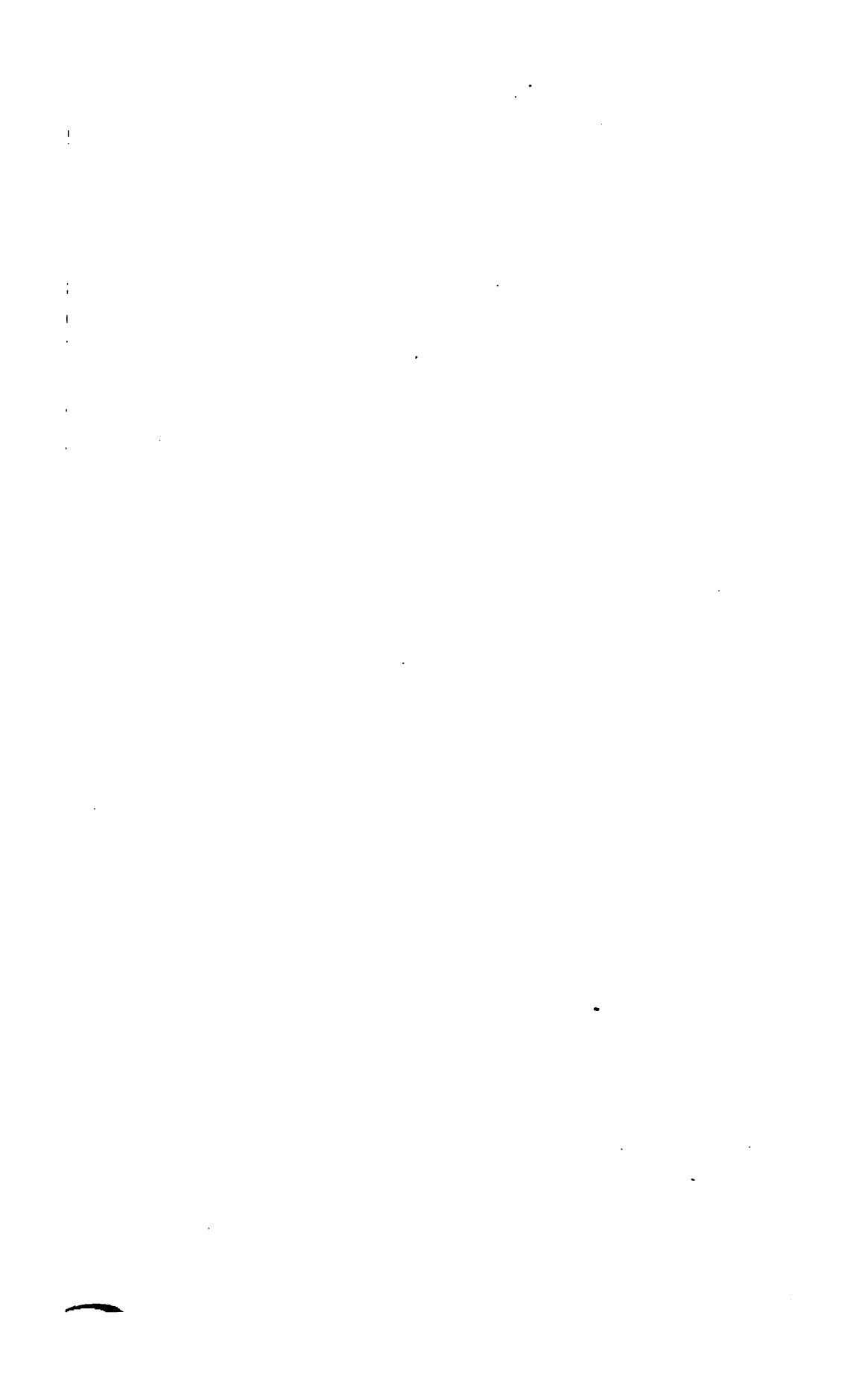
The Year.	Births per 1000 of the population.	Death rate per 1000 living.	Deaths of Childr under 1 year per cent. to Total Deaths.	Deaths of Children under 1 year per cent. to Registered Births.	Deaths of Children under 3 years per cent. to Total Deaths.	Deaths in Public Institutions
1876	32.9	19.5	26.6	17.1	44.6	338*
1875	31.2	19.4	25.0	15.6	40.3	338
1874	31.7	19.5	28.5	17.5	45.4	252
1873	31.4	18.3	27.0	15.9	40.0	272
1872	32.1	17.0	28.9	15.6	44.2	264
1871	31.3	19.1	25.0	15.0	41.6	252
1870	32.1	21.2	24.0	16.4	42.9	330
1869	32.5	20.2	†	†	†	318
1868	33.1	21.0	†	†	†	303
1867	31.2	19.0	†	†	40.6	221
1866	32.0	20.4	†	†	41.6	248
Average of 10 Years, 1866—75.	31.8	19.5	†	†	42.0	289

* Viz. The Workhouse (225), and the Hospital for Chest Diseases at Brompton (113.)

† No information.

NOTE.—The calculations in this Table are made on the gross number of deaths registered without deduction of those of non-parishioners at public institutions.

CAUSES OF DEATH.	AGES.												Total deaths under five.	Grand total.	Keston Town.	Brompton.	Sub Districts.	
	Under 1.	1 to 2.	2 to 5.	5 to 15.	15 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	85 to 95.						95 and upwards.
<i>Causes not specified or ill defined</i>	7	2	4	3	1	2	4	8	13	21	14	1	...	13	80	72	8	
<i>Order 2.—ORGANS OF CIRCULATION.</i>																		
Pericarditis	...	...	...	...	...	...	...	1	1	2	...	...	...	...	5	5	...
Aneurism	...	...	...	...	...	...	...	1	1	...	...	...	...	...	3	3	...
Heart Disease, &c.	6	...	...	5	9	10	14	7	35	40	12	...	...	6	133	99	39
<i>Order 3.—RESPIRATORY ORGANS.</i>																		
Laryngitis	5	7	2	1	...	2	...	...	1	...	...	...	...	...	...	...	...
Bronchitis	51	40	17	5	1	8	10	20	41	47	40	5	...	14	18	14	4	
Pleurisy	...	...	...	1	...	...	...	...	...	...	...	...	...	138	315	265	50
Pneumonia	71	30	24	8	5	...	11	12	13	11	4	...	...	125	197	161	36
Asthma	1	...	...	...	...	...	1	1	5	3	2	...	...	1	13	9	4
Lung Disease, &c.	15	4	2	...	...	2	6	1	1	3	4	1	...	21	39	32	7
<i>Order 4.—DIGESTIVE ORGANS.</i>																		
Gastritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Drowning	9	...	...	...	...	...	1	...	2	...	...	...	...	9	12	11	1
Suffocation	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1
Otherwise	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>Order 3.—HOMICIDE.</i>																		
Murder and Manslaughter	1	...	...	...	...	...	...	...	1	...	...	...	...	1	2	...	2
<i>Order 4.—SUICIDE.</i>																		
Wounds: Gunshot, Cut, Stab...	...	...	...	...	...	1	2	2	...	...	...	...	...	...	5	1	4
Poison	...	...	...	...	1	...	...	1	...	...	...	...	...	...	2	...	2
Drowning	...	...	...	1	...	...	...	1	...	...	...	...	...	...	1	1	...
Hanging	...	...	...	...	1	...	...	...	...	...	...	...	...	...	3	1	2
Otherwise	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>Order 5.—EXECUTION</i>																		
Hanging	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Violent Deaths (not classed)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sudden deaths (cause unascertained)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	12	2	1	3	3	5	5	4	6	2	2	...	...	15	45	32	13
	7	...	...	...	...	...	...	1	1	...	...	...	...	7	9	3	6



CAUSES OF DEATH.	AGES													Total deaths under five.	Grand total.	Kensington Town.	Brompton
	Under 1.	1 to 2.	2 to 5.	5 to 15.	15 to 25.	25 to 35.	35 to 45.	45 to 55.	55 to 65.	65 to 75.	75 to 85.	85 to 95.	95 and upwards.				
<i>Order 2.—ORGANS OF CIRCULATION.</i>																	
Pericarditis	...	...	...	...	...	...	1	1	1	2	...	...	...	...	...	5	...
Aneurism	...	...	...	...	...	...	1	1	1	1	...	...	...	...	...	3	...
Heart Disease, &c.	6	...	...	5	9	10	14	7	35	40	12	...	...	...	6	138	39
<i>Order 3.—RESPIRATORY ORGANS.</i>																	
Laryngitis	5	7	2	1	...	2	...	...	1	...	...	...	...	...	...	...	...
Bronchitis	61	40	17	5	1	8	10	20	41	47	40	5	...	...	14	18	4
Pleurisy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	138	315	265
Pneumonia	71	30	24	8	5	...	11	12	13	11	...	...	...	...	1	1	...
Asthma	1	...	...	...	...	...	...	1	5	3	2	...	...	...	125	197	161
Lung Disease, &c.	15	4	2	...	...	2	6	1	1	3	4	1	...	...	1	13	9
									1	...	...	...	...	...	21	39	7
<i>Order 4.—DIGESTIVE ORGANS.</i>																	
Gastritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Drowning	9	...	...	...	...	...	1	...	2	...	...	...	...	...	9	12	...
Suffocation	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
Otherwise	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>Order 3.—HOMICIDE.</i>																	
Murder and Manslaughter	1	...	...	...	...	...	...	...	1	...	...	...	...	...	1	2	...
<i>Order 4.—SUICIDE.</i>																	
Wounds: Gunshot, Cut, Stab...	...	...	...	...	...	1	2	2	...	...	...	...	...	...	...	5	1
Poison	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	2	2
Drowning	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Hanging	...	...	...	1	1	1	...	1	...	...	...	...	...	...	...	3	1
Otherwise	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>Order 5.—EXECUTION</i>																	
Hanging	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Violent Deaths (not classed)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sudden deaths (cause unascertained)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>Causes not specified or ill defined</i>	12	2	1	3	3	5	5	4	6	2	2	...	...	...	15	45	32
	7	...	...	...	...	...	...	1	1	...	...	...	...	...	7	9	3
																	6

TABLE V.

Showing the number of Deaths in 10 years, 1866-75, from the seven principal Zymotic Diseases, and the number in 1876, &c.

Disease.	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	Annual Average Deaths in 10 years 1866-75	Proportion of Deaths to 1000 Deaths in 10 years, 1866-75	1876	Proportion of Deaths to 1000 Deaths in 1876.
Smallpox	10	29	4	6	8	120	68	1	0	0	24.6	1.5	8	2.7
Measles	40	19	84	27	70	64	43	88	121	23	52.9	28.5	128	44.8
Scarlet Fever.....	28	35	170	106	198	95	29	10	32	83	78.6	34.0	59	20.4
Diphtheria.....	Not separately registered.										10.8	4.6	17	5.8
Whooping Cough ...	28	68	34	71	55	72	77	44	45	107	60.1	25.4	124	42.9
" Fever"	88	46	52	42	46	48	42	41	52	29	43.1	18.2	86	12.4
Diarrhoea	112	78	113	108	154	129	110	145	112	107	116.8	49.7	126	48.5
Total, KENSINGTON	251	275	457	369	545	539	383	290	388	372	386.9	165.9	498	172
Total, London	14,761	11,660	14,925	17,413	16,476	19,455	12,699	11,385	11,230	13,411	13,341	187	12,565	162
TOTAL, ENGLAND & WALES 1866-74.....	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1866-74	1866-74	1875	1876
	92,030	82,692	72,587	97,352	90,350	100,487	103,801	91,743	89,286	96,279	83,300	186	82,332	151

The Totals for England and Wales are for the ten years 1865-74, compared with 1876, the last year of publication at present.

TABLE VI.
Inspectors' Report of the Sanitary Work completed in the year ended March 25th, 1877.

Sub-districts.	No. of Complaints received during the year.	No. of Houses and Premises, &c., inspected.	Results of Inspection.			House Drains.		Privies and W.C.'s.			Dust Bins.		Water Supply.		Miscellaneous.									
			Orders issued for Sanitary Amendments of Houses and Premises.	Houses, Premises, &c., Cleansed, Repaired and Whitewashed.	Houses Disinfected after Infectious Diseases.	Repaired, Cleansed, &c.	Trapped or Ventilated.	Repaired, Covered, &c.	Supplied with Water.	New provided.	New provided.	Repaired, Covered, &c.	Cisterns (new) erected.	Cisterns Cleansed, Repaired and Covered.	No. of Lodging Houses registered under 35th Clause of Sanitary Acts, 1866.*	No. of Dust Complaints received and attended to.	Removal of accumulations of Dung, Stagnant Water, Animal and other Refuse.	Removal of Animals, &c., improperly kept.	Bakehouses.	Licensed Cowhouses.	Licensed Slaughterhouses.	Regularly Inspected.	Other Proceedings, e.g. Legal Proceedings.	
North.	689	1645	652	566	26	152	122	84	172	2	18	92	14	76	76	..	2022	72	16	66	17	21	51	
South.	668	1574	658	592	16	138	85	67	119	..	7	49	6	59	59	..	2549	65	4	51	11	10	10	
Total.	1357	3219	1310	1168	42	290	207	151	291	2	25	141	20	135	135	..	4571	137	20	117	28	31	61	

* This Act has not been put into operation

* This Act has not been put into operation.

TABLE VIa.

Summary of Monthly Returns of Sanitary Work done by the Inspectors.

Date of Report.	Houses Inspected.		Mews Inspected.		Slaughter Houses Inspected.		Cowsheds Inspected.		Bakehouses Inspected.		Offensive Trades Inspected.		Sanitary Orders Issued.		Letters, &c. Received re Dust Removal.		Complaints of non-removal of Dust.		Orders Issued for the removal of Dust.		Date of Report.
	North	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South	North	South	
May 3, 1876	104	95	20	27	8	6	7	7	10	11	0	0	61	70	150	236	2	3	332	396	May 3, 1876
May 31 "	126	119	26	23	8	6	10	8	12	11	4	0	58	51	131	111	1	1	365	252	May 31 "
June 28 "	156	138	28	34	9	7	8	9	13	12	8	0	53	64	176	308	0	7	378	535	June 30 "
July 26 "	167	148	24	22	28	21	22	16	12	11	7	0	87	73	178	314	2	4	471	596	July 26 "
Aug. 23 "	137	125	25	19	21	14	19	16	12	13	9	0	68	37	127	145	1	3	211	195	Aug. 23 "
Sept. 20 "	78	117	21	36	21	10	12	10	14	16	4	0	32	48	39	41	0	0	87	82	Sept. 20 "
Oct. 18 "	119	123	24	16	13	19	16	11	12	13	0	0	67	68	53	98	1	6	171	146	Oct. 18 "
Nov. 15 "	125	112	36	28	11	8	14	10	22	16	4	0	76	65	49	80	1	3	137	153	Nov. 15 "
Dec. 13 "	126	132	32	38	9	7	12	8	18	19	3	0	51	67	74	147	1	2	188	286	Dec. 13 "
Jan. 10, 1877	104	109	29	32	12	5	11	8	22	22	2	0	58	38	240	243	9	6	454	450	Jan. 10, 1877
Feb. 7 "	132	106	34	29	10	6	13	7	9	13	5	0	58	56	444	328	11	8	1015	500	Feb. 7 "
March 7 "	145	128	36	39	9	7	12	8	14	22	2	0	55	53	236	268	3	5	608	500	March 7 "
April 4 "	136	132	39	42	12	8	14	9	18	20	6	0	52	64	125	225	2	3	330	419	April 4 "
Totals.	1645	1574	374	885	181	124	170	127	188	199	54	—	776	754	2022	2649	34	51	4747	4500	Totals.

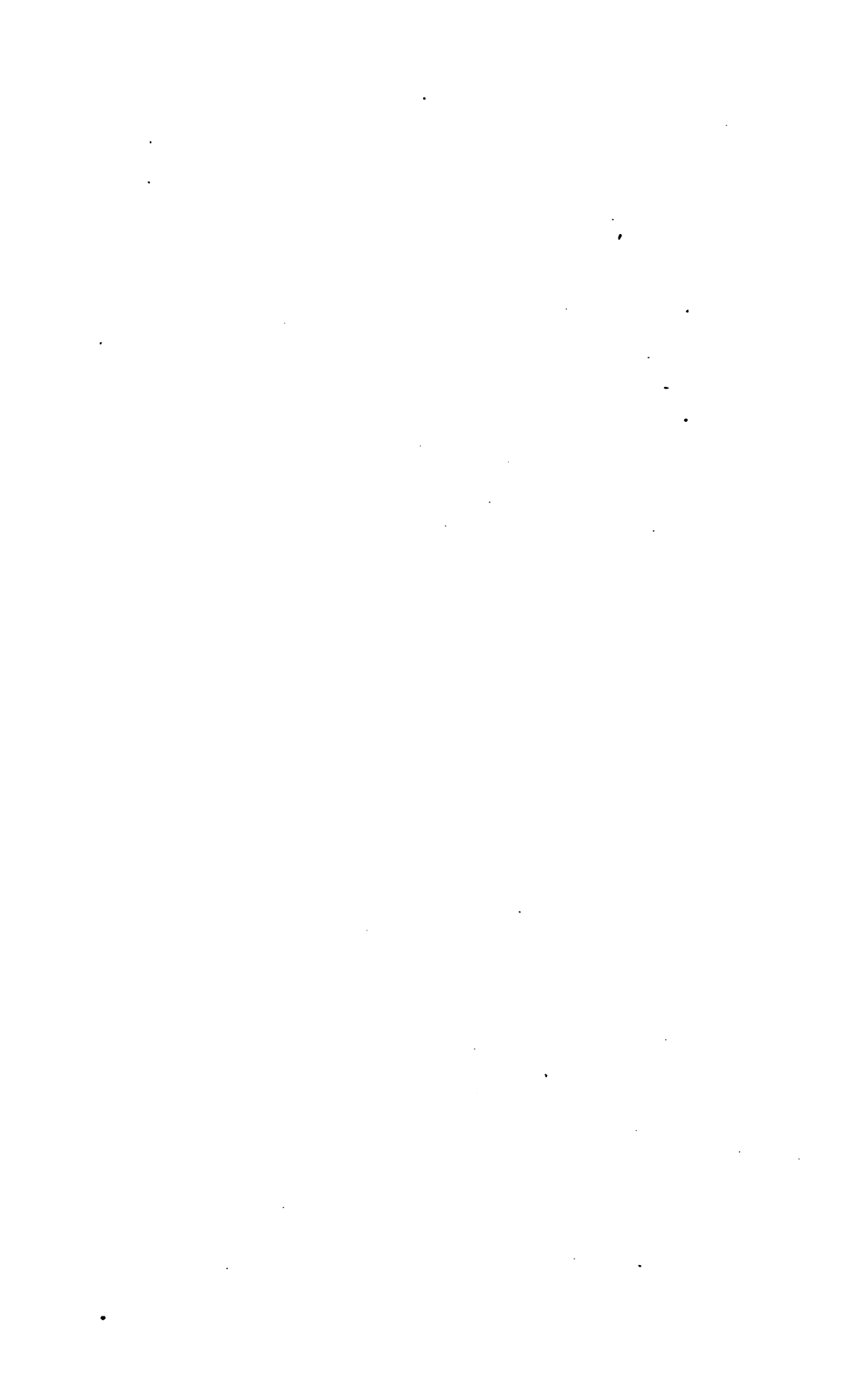
TABLE VII.

Showing the Death rate per 1,000 persons living; the annual rate of Mortality per 1,000 living from seven Zymotic Diseases; and the proportion of Deaths from these Diseases to the total Deaths in Kensington and in all London in 1876, and in the ten years, 1866-75.

The Year.	Deaths per 1000 living.		Total Deaths from seven Zymotic diseases, Kensington.	Annual rate of Mortality per 1,000 living from seven Zymotic Diseases.		Proportion of Deaths to 1000 Deaths from seven Zymotic diseases.		The Year.
	Kensington.	London.		Kensington.	London.	Kensington.	London.	
1866	20.4	26.4	259	2.6	4.8	133	185	1866
1867	19.0	23.0	276	2.7	3.7	142	166	1867
1868	21.0	23.6	457	4.2	4.7	208	200	1868
1869	20.2	24.6	369	3.3	5.5	164	227	1869
1870	21.2	24.1	545	4.6	5.1	222	213	1870
1871	19.1	24.7	542	4.4	6.0	233	242	1871
1872	17.0	21.4	390	3.0	3.8	181	179	1872
1873	18.3	22.5	290	2.1	3.3	119	149	1873
1874	19.5	22.5	388	2.8	3.3	144	147	1874
1875	19.4	23.7	372	2.5	3.9	133	164	1875
AVERAGE OF TEN YEARS.	19.5	23.6	388	3.2	4.4	167	187	AVERAGE OF TEN YEARS.
1876	19.5	22.3	498	3.3	3.6	172	162	1876

TABLE VIII.
Comparative Analysis of the Mortality in all London and in Kensington, in 52 weeks, ended 30th December, 1876.

LOCALITY.	Annual Death Rate per 1,000 living from all causes.	Annual Death Rate per 1,000 living from principal Zymotic diseases.	Per centage of Deaths under 1 year to Births Registered.	PER CENTAGE OF DEATHS TO TOTAL DEATHS.					
				Under 1 year of age.	At 60 years of age and upwards.	From Zymotic diseases.	From Violence.	Registered upon infor- mation of the Coroner. (Inquests.)	Registered in large Public Institutions.
London ...	23.6	3.6	16.6	25.7	20.0	16.2	5.7	8	18.0
Kensington ...	19.5	3.3	17.1	26.6	20.1	17.2	1.7	5.7	11.7



Showing the Principal Localities in which fatal
Kensington Town Registration Sub-District.

Locality.	DISEASES.										Locality.
	Small Pox.	Measles.	Scarlet Fever.	Diphtheria	Whooping Cough.	Typhus.	Enteric.	S. C. F.	Diarrhoea.	Total.	
Abingdon Villas	1	...	...	1	Johnson Street
Abingdon Road	1	...	...	...	1	...	1	3	Kensington Square
Absalom Road	...	1	1	...	1	...	...	...	1	4	Ladbroke Grove
Acklam Road	...	3	...	...	...	...	1	...	4	8	" " Road
Adair Road	2	2	Lancaster Road
Addison Road	1	...	...	...	...	1	2	Ledbury Road
Admiral Place	...	2	...	...	1	...	...	...	3	3	Lucerne Mews
" Terrace	...	2	...	...	...	...	...	...	1	3	Lonsdale Road
Archer Street	1	...	...	...	1	2	Manchester Road
" Mews	2	...	...	...	2	2	Manchester Street
Aston Road	1	...	...	...	...	...	...	1	Merton Road
Appleford Road	...	1	...	...	2	...	...	...	2	5	Newcombe Street
Bangor Street	...	2	1	...	...	...	...	...	2	5	Norland Square
Barandon Street	...	2	...	...	...	...	...	...	1	3	Notting Hill Square
Barracks (The)	...	2	...	...	...	...	...	...	1	3	Orchard Street
Basing Road	1	...	...	1	Oxford Gardens
Bevington Road	2	2	Pamber Street
Blagrove Road	...	1	...	...	2	...	...	...	...	3	Peel Street
Blenheim Crescent	1	...	...	2	Pembroke Place
Blechynden Street	4	...	3	...	...	...	...	7	Petersham Mews
Blithfield Street	...	1	1	...	...	...	...	...	...	2	Portland Road
Bolton Road	...	3	...	...	2	...	...	1	...	6	Portobello Road
" Mews	2	2	Pottery Lane
Bramley Road	...	3	...	...	2	...	...	...	4	9	Prince's Place
Bransford Street	1	...	...	...	...	...	...	1	" Road
Britannia Terrace	...	1	...	...	1	...	...	...	1	3	Queen's Road
Brunswick Gardens	1	...	...	1	Queen's Terrace Mews
" Mews	2	...	...	...	...	2	St. Ann's Road
" Terrace	...	1	...	...	1	...	...	...	...	2	St. Ervan's Road
Burden Mews	1	...	...	...	...	...	...	1	St. Clement's Road
Clarendon Road	1	...	2	...	...	1	...	4	St. Katherine's Road
Convent Gardens	...	1	...	...	1	...	...	...	2	4	St. James's Street
Crescent Street	...	2	...	...	2	...	...	...	...	4	St. Mark's Road
Cornwall Road	2	2	Southam Street
Connaught Terrace	1	...	...	...	1	...	...	2	Stamford Road
Dartmoor Street	...	3	2	...	3	...	1	...	3	12	Silchester Road
Denbigh Terrace	...	2	...	...	...	...	...	...	...	2	Stoneleigh Street
Drayson Mews	1	...	...	...	...	...	...	1	Swinbroke Road
Edenham Street	...	1	...	...	...	...	...	...	4	5	Talbot Grove
Edge Street	...	2	...	...	...	...	...	...	...	2	Talbot Mews
Edwardes Place	1	...	...	1	Tavistock Crescent
Eldon Road	1	...	...	1	Thresher's Cottages
Faraday Road	1	...	...	1	...	2	Treverton Street
Fowell Street	...	2	...	...	...	...	...	...	...	2	Virginia Place
Golborne Road	...	1	1	...	6	...	...	...	5	13	Walmer Road
Hazlewood Crescent	...	3	...	...	1	...	...	...	...	4	Workhouse, The
Holland Lane	1	...	...	...	...	...	...	1	Wornington Road
Holland Park Mews	1	...	...	...	...	...	...	1	Uxbridge Street

LE IX.

es of the chief Zymotic Diseases occurred in 1876.

Brompton Registration Sub-District.

DISEASES.								Locality.	DISEASES.									
Measles.	Scarlet Fever.	Diphtheria	Whooping Cough.	Typhus.	Enteric.	S. C. F.	Diarrhoea.		Small Pox	Measles.	Scarlet Fever.	Diphtheria	Whooping Cough.	Typhus	Enteric.	S. C. F.	Diarrhoea.	Total.
...	1	...	...	...	...	...	1	Adrian Terrace	...	...	2	...	1	...	...	...	1	4
...	3	...	...	...	1	...	1	Ashley Cottages	...	...	...	...	...	...	...	...	2	2
...	1	...	1	...	1	...	1	Butt Street	...	...	1	...	...	...	...	1	3	2
...	4	1	...	1	1	...	2	Chapel Place	...	...	...	...	...	...	...	3	3	3
...	...	1	1	...	...	...	1	Coleherne Mews	...	...	...	1	...	...	...	...	1	1
...	...	1	...	...	...	...	1	Ensor Mews	...	...	...	1	...	...	...	...	1	1
2	...	...	6	...	...	...	11	Finborough Road	...	...	1	...	1	...	1	...	3	3
2	...	...	2	...	...	...	2	Garden Row	...	...	1	...	...	...	...	...	1	1
2	...	1	...	...	...	...	3	Ifield Road	...	1	1	...	...	...	...	...	2	2
...	1	...	...	...	...	...	1	Montpelier Row	...	...	...	...	...	...	...	2	2	2
2	...	...	1	...	1	...	4	Princes Mews	...	1	1	...	...	...	...	...	2	2
...	...	1	...	...	...	...	1	Queen's Gardens	...	1	...	...	1	...	...	...	2	2
1	...	1	...	...	...	...	3	Queen's Gate	...	...	1	...	...	...	...	...	1	1
...	1	...	...	...	...	...	1	Queen's Road	...	...	2	...	...	...	...	...	2	2
...	...	...	...	...	...	...	1	Rutland Street	...	2	1	...	...	...	...	...	3	3
...	...	...	...	...	...	...	2	St. Mark's Road	...	...	1	...	...	...	...	...	1	1
...	1	...	2	...	...	...	2	Stamford Cottages	...	...	1	...	...	...	...	...	1	1
1	...	...	1	...	...	...	3	Thurloe Square	...	...	...	1	...	...	...	...	1	1
...	...	...	...	...	...	...	2	Warwick Road	...	...	1	...	...	...	...	...	1	1
2	...	...	4	...	...	...	3	West Cromwell Road	...	...	1	...	...	...	...	...	1	1
5	1	2	4	...	1	...	5	Yeoman's Row	...	2	2	...	...	1	...	1	6	6
...	...	1	...	1	...	...	2											
...	...	...	2	...	1	...	3											
...	...	1	...	...	...	...	1											
3	1	...	2	...	...	...	2											8
3	3	...	2	...	1	...	3											12
2	...	...	2	...	...	...	3											7
2	1	1	1	...	...	...	2											7
2	...	...	...	...	...	...	1											4
...	...	1	...	...	...	...	1											2
1	2	...	...	...	...	1	3											7
...	1	...	...	...	...	...	1											2
1	...	1	...	...	...	...	1											2
1	1	...	2	...	...	...	4											4
...	1	...	2	...	...	...	3											3
2	...	...	...	...	...	...	2											2
2	...	...	2	...	...	...	2											6
...	1	...	1	...	...	...	1											3
3	...	...	5	...	...	...	1											9
2	...	...	1	...	...	...	3											3
3	...	...	4	...	2	...	1											5
2	...	...	4	...	...	...	9											15
1	1	...	...	1	...	...	1											4
...	...	...	...	...	1	...	1											1

* Cholerae Diarrhoea.



TABLE X.
PARISH OF ST. MARY ABBOTTS, KENSINGTON.

Return respecting the Vaccination of Children whose Births were Registered during the year 1876.

DATE.	Registration Sub-Districts comprised in Vaccination Officer's District.	Number of Births returned in Birth List Sheets.	Number of these Births duly entered in Columns 10, 11, and 13 of the Vaccination Register (Birth List Sheets) viz.:				Number of these Births which are not entered in the Vaccination Register, on account of			
			Column 10 Successfully vaccinated.	Column 11.		Column 13. Dead. Un-vacci- nated.	Postpone- ment by Medical Certificate.	Removal to Districts, the Vacci- nation Officer of which has been duly apprized.	Removal to places unknown, or which cannot be reached. and cases not having been found.	Cases still under proceedings by summons and otherwise.
	1	2	3	4	5	6	8	9	10	
1st January to 30th June	Kensington Town ...	1821	1533	9	...	160	20	10	89	...
	Brompton ...	446	386	3	...	36	2	1	18	...
1st July to 31st Dec.	Kensington Town ...	1865	1590	9	2	172	25	15	44	6
	Brompton ...	390	339	2	...	30	5	2	12	2
	TOTAL ...	4522	3848	22	2	398	52	28	163	8

TABLE XI.

LICENSED SLAUGHTER HOUSES.

SOUTH SANITARY DISTRICT, (10.)

LOCALITY.	LICENSEE.
11, Church Street, Kensington	Mr. Stimpson
11, Peel Place, Silver Street ...	„ Andrews
The Mall, Silver Street ...	„ Wright
183, Brompton Road ...	„ French
60, Kensington High Street ...	„ English
Phillimore Mews ...	„ Clayton
15, High Street, Notting Hill	„ Short
133, Ditto ditto	„ Candy
6, Addison Terrace, ditto ...	„ Beall
35, Earl's Court Road ...	„ Matson

NORTH SANITARY DISTRICT (21).

13, Archer Mews ...	Mr. Bawcombe
20, Bolton Mews ...	„ Smith
195, Clarendon Road ...	„ Rush
10, Edenham Mews ...	„ Gibson
Tavistock Mews Portobello Road	„ Hughes
8, Vernon Mews, Portobello Road	„ Young
196, Portobello Road ...	„ Scoles
Ledbury Mews ...	„ French
Lonsdale Mews ...	„ Olney
50, Princes Road, Notting Hill	„ Parratt
98, Ditto ditto ..	„ Stovold
10, Princes Mews, Notting Hill	„ Cole
10, Princes Road Mews ditto	„ Coles
Clarendon Mews ditto	„ Colley
41, Princes Place ditto	„ Pickworth
23, Norfolk Terrace ..	„ Matthews
61, Silchester Road ...	„ Matthews
235, Walmer Road ...	„ Van
Mary Place, Notting Dale ...	„ Nind
Royal Crescent Mews ...	„ Macpherson
Ditto ditto ...	„ Down

TABLE XII.

LICENSED COW SHEDS.

SOUTH SANITARY DISTRICT. (11.)

LOCALITY.	LICENSEE.
5, Gros'ter Grove ...	Mrs. Reeves
7, The Mall, Notting Hill ...	Mr. Edwards
Ditto Ditto ...	" Draper
St. Mark's Road, Fulham Road	" Starr
Holland Park Farm ...	" E. C. Tisdall
Ditto Dairy ...	" E. C. Tisdall
Newland Terrace ...	" E. C. Tisdall
Warwick Road ...	" Pool
Stratford Road ...	" Clarke
Addison Cottage, Lorne Gardens	" Lyons
Newcombe Street ...	" Lunn

NORTH SANITARY DISTRICT. (19.)

191, Portobello Road ...	Messrs. Hughes and Son
207, Ditto ...	Aylesbury Dairy Company
3, 4, 5, Angola Mews ...	Mr. Jennings
4, 5, 6, Wornington Mews ...	" Jones
Ledbury Mews ...	" Rennie
Ditto ...	" Liddiard
187, Walmer Road ...	" Arnsby
235, Walmer Road ...	" Van
47, Tobin Street, Notting Dale	" Bedgood
12, Blechynden Mews ...	" White
14, ditto ...	" Copperwheat
15, ditto ...	" Salisbury
10, Talbot Mews ..	" Hornsby
3, 4, & 5, Archer Mews ...	" Skingle
23, Bramley Road ...	" Crew
27, Queen's Road ...	" Williams
49, Tavistock Crescent ...	" Minter
2, Portobello Terrace ...	Messrs. Ross & McCulloch
Elm Cottage, St. Mark's Road	Mr. G. Attfield



